RIVERS AND HARBORS—FLOOD CONTROL 1954

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HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON PUBLIC WORKS UNITED STATES SENATE

EIGHTY-THIRD CONGRESS

SECOND SESSION

ON

H. R. 9859

AN ACT AUTHORIZING THE CONSTRUCTION, REPAIR, AND PRESERVATION OF CERTAIN PUBLIC WORKS ON RIVERS AND HARBORS FOR NAVIGATION, FLOOD CONTROL, AND FOR OTHER PURPOSES

JULY 22 AND 23, 1954

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RIVERS AND HARBORS-FLOOD CONTROL. 1954

THURSDAY, JULY 22, 1954

UNITED STATES SENATE,
COMMITTEE ON PUBLIC WORKS,
SUBCOMMITTEE ON FLOOD CONTROL-RIVERS AND HARBORS,
Washington, D. C.

The subcommittee met, pursuant to call, at 10:40 a. m., in room 412, Senate Office Building, Senator Prescott Bush, chairman of the subcommittee, presiding.

Present: Senators Martin (chairman), Bush, Kuchel, Upton, Holland, and Stennis.

Also present: Charles N. Kapnic, chief clerk; Eloise Porter, assistant clerk; Ellsworth W. Bassett, and Theo W. Sneed, technical staff members.

Senator BUSH. The committee will be in order.

This is a meeting of the Subcommittee on Flood Control-Rivers and Harbors, and we are going to take up consideration of H. R. 9859, which has been passed by the House, the bill authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.

Without objection, the bill, H. R. 9859, will be made a part of the record at this point.

(The bill, H. R. 9859, is as follows:)

[H. R. 9859, 83d Cong., 2d sess., Rept. No. 2247]

A BILL Authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I—RIVERS AND HARBORS

SEC. 101. That the following works of improvement of rivers and harbors and other waterways for navigation, flood control, and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers, in accordance with the plans and subject to the conditions recommended by the Chief of Engineers in the respective reports hereinafter designated: *Provided*, That the provisions of section 1 of the River and Harbor Act approved March 2, 1945 (Public, Numbered 14, Seventy-ninth Congress, first session), shall govern with respect to projects authorized in this title; and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto, shall apply as if herein set forth in full:

Lubec Channel, Maine: Senate Document Numbered 243, Eighty-first Congress, at an estimated cost of $74,000;

Portsmouth Harbor and Piscataqua River, Maine and New Hampshire: House Document Numbered 556, Eighty-second Congress, at an estimated cost of $952,000;

Lynn Harbor, Massachusetts: House Document Numbered 568, Eighty-first Congress, at an estimated cost of $65,000: *Provided*, That local interests contribute

in cash the cost of dredging the easterly three hundred feet of the Municipal Channel to a depth of twenty-two feet, presently estimated to cost $4,700, before the work is undertaken;

Weymouth Fore River, Massachusetts: House Document Numbered 555, Eighty-second Congress, at an estimated cost of $4,400,000;

Town River, Quincy, Massachusetts: House Document Numbered 108, Eighty-third Congress, at an estimated cost of $525,000;

Scituate Harbor, Massachusetts: House Document Numbered 241, Eighty-third Congress, at an estimated cost of $375,000;

Fall River Harbor, Massachusetts: House Document Numbered 405, Eighty-third Congress, at an estimated cost of $694,000;

Bullocks Point Cove, Rhode Island: House Document Numbered 242, Eighty-third Congress, at an estimated cost of $166,400;

Sakonnet Harbor, Rhode Island: House Document Numbered 436, Eighty-second Congress, at an estimated cost of $555,400: *Provided*, That local interests contribute in cash, 4 per centum of the cost of the project, presently estimated as $23,000;

Patchogue River, Connecticut: House Document Numbered 164, Eighty-third Congress, at an estimated cost of $135,000;

Westport Harbor and Saugatuck River, Connecticut: House Document Numbered 488, Eighty-first Congress, at an estimated cost of $112,500;

Westchester Creek, New York: House Document Numbered 92, Eighty-second Congress, at an estimated cost of $32,200;

Hudson River, New York: House Document Numbered 228, Eighty-third Congress, at an estimated cost of $31,928,000;

Shoal Harbor and Compton Creek, New Jersey: House Document Numbered 89, Eighty-second Congress, at an estimated cost of $138,000;

Hackensack River, New Jersey: House Document Numbered 252, Eighty-second Congress, at an estimated cost of $1,973,900;

Mispillion River, Delaware: Senate Document Numbered 229, Eighty-first Congress, at an estimated cost of $469,400;

Inland Waterway from Delaware River to Chesapeake Bay, Delaware and Maryland: Senate Document Numbered 123, Eighty-third Congress, at an estimated cost of $101,000,000: *Provided*, That the standard of local contribution for the construction of all bridges, including approaches thereto, required by the project shall be the same standard heretofore applied to the construction of St. Georges Bridge;

Queenstown Harbor, Maryland: House Document Numbered 718, Eighty-first Congress, at an estimated cost of $31,900;

Little Creek, Kent Island, Queen Anne County, Maryland: House Document Numbered 715, Eighty-first Congress, at an estimated cost of $23,000;

Anchorage at Lowes Wharf, Talbot County, Maryland: House Document Numbered 90, Eighty-second Congress, at an estimated cost of $29,000;

Nanticoke River, Bivalve, Wicomico County, Maryland: House Document Numbered 91, Eighty-second Congress, at an estimated cost of $192,600;

Webster Cove, Somerset County, Maryland: House Document Numbered 619, Eighty-first Congress, at an estimated cost of $20,300;

Crisfield Harbor, Maryland: House Document Numbered 435, Eighty-first Congress, at an estimated cost of $101,750: *Provided*, That the cash contribution required of local interests shall be the difference in Federal costs between plans 1 and 2 at the time the project is undertaken;

Rhodes Point to Tylerton, Somerset County, Maryland: House Document Numbered 51, Eighty-second Congress, at an estimated cost of $45,100;

Pocomoke River, Maryland: House Document Numbered 486, Eighty-first Congress, at an estimated cost of $678,300;

Ocean City Harbor and Inlet and Sinepuxent Bay, Maryland: House Document Numbered 444, Eighty-second Congress, at an estimated cost of $704,000;

Parrotts Creek, Virginia: House Document Numbered 46, Eighty-second Congress, at an estimated cost of $38,700;

Norfolk Harbor and Thimble Shoal Channel, Virginia: Senate Document Numbered 122, Eighty-third Congress, at an estimated cost of $6,138,700;

Deep Creek, Accomack County, Virginia: House Document Numbered 477, Eighty-first Congress, at an estimated cost of $95,000;

Oyster Channel, Virginia: Senate Document Numbered 49, Eighty-third Congress, at an estimated cost of $75,200;

Wallace Channel, Pamlico Sound, North Carolina: House Document Numbered 453, Eighty-first Congress, at an estimated cost of $108,000;

Smiths Creek, North Carolina: House Document Numbered 170, Eighty-third Congress, at an estimated cost of $102,000;

Channel from Hatteras Inlet to Hatteras, and Rollinson Channel, North Carolina: House Document Numbered 411, Eighty-third Congress, at an estimated cost of $175,000;

Peltier Creek, North Carolina, to Intracoastal Waterway: House Document Numbered 379, Eighty-first Congress, at an estimated cost of $43,200;

Channel Port Royal Sound to Beaufort, South Carolina: House Document Numbered 469, Eighty-first Congress, at an estimated cost of $765,000;

Savannah Harbor, Georgia: House Document Numbered 110, Eighty-third Congress, at an estimated cost of $414,900;

Rice Creek, Putnam County, Florida: House Document Numbered 446, Eighty-second Congress, at an estimated cost of $82,200;

Hillsboro River, Florida: House Document Numbered 567, Eighty-first Congress, at an estimated cost of $16,600;

Apalachicola Bay, Florida: House Document Numbered 156, Eighty-second Congress, at an estimated cost of $98,000;

Apalachicola Bay, Florida, channel across St. George Island: House Document Numbered 557, Eighty-second Congress, at an estimated cost of $635,700;

St. Joseph Bay, Florida: House Document Numbered 595, Eighty-first Congress, at an estimated cost of $1,312,000;

Mobile Harbor, Alabama: House Document Numbered 74, Eighty-third Congress, at an estimated cost of $5,778,000;

Dauphin Island Bay, Alabama: House Document Numbered 394, Eighty-second Congress, at an estimated cost of $70,000;

Bayou Segnette Waterway, Louisiana: House Document Numbered 413, Eighty-third Congress, at an estimated cost of $520,000;

Sabine-Neches Waterway, Texas: Senate Document Numbered 80, Eighty-third Congress, at an estimated cost of $6,875,000;

Guadalupe River at Seadrift, Texas: House Document Numbered 478, Eighty-first Congress, at an estimated cost of $74,300;

Aransas Pass, Texas, in connection with the Gulf Intracoastal Waterway: House Document Numbered 376, Eighty-third Congress, at an estimated cost of $30,700;

Turtle Cove, Texas: House Document Numbered 654, Eighty-first Congress, at an estimated cost of $40,000;

Port Aransas-Corpus Christi Waterway, Texas: House Document Numbered 89, Eighty-third Congress, at an estimated cost of $829,100: *Provided*, That work already performed by local interests on this project, in accordance with recommended plan, may be credited to the cash contribution required of local interests;

Mississippi River at Louisiana, Missouri: House Document Numbered 251, Eighty-second Congress, at an estimated cost of $82,600;

Mississippi River at Chester, Illinois: House Document Numbered 230, Eighty-third Congress, at an estimated cost of $65,000;

Crooked Slough Harbor, Winona, Minnesota: House Document Numbered 347, Eighty-third Congress, at an estimated cost of $142,000;

Cumberland River, Kentucky and Tennessee: Senate Document Numbered 81, Eighty-third Congress; and a monetary authorization not to exceed the estimated cost of the Dover and Eureka dams as described in House Document Numbered 761, Seventy-ninth Congress, "Cumberland River and its tributaries, Tennessee and Kentucky", authorized by the River and Harbor Act of July 24, 1946, is hereby authorized to be expended for partial accomplishment of the project hereby approved;

Green and Barren Rivers, Kentucky: Senate Document Numbered 82, Eighty-third Congress, at an estimated cost of $3,434,000 for channel dredging and fender system work;

Knife River Harbor, Minnesota: House Document Numbered 463, Eighty-third Congress, at an additional estimated cost of $219,900;

Cornucopia Harbor, Wisconsin: House Document Numbered 434, Eighty-third Congress, at an estimated cost of $220,000;

Sheboygan Harbor, Wisconsin: House Document Numbered 554, Eighty-second Congress, at an estimated cost of $217,200;

Holland Harbor, Michigan: House Document Numbered 282, Eighty-third Congress, at an estimated cost of $574,400: *Provided*, That local interests will contribute 25 per centum of the cost of dredging Section B, but not to exceed $45,500, in addition to the local cooperation required by the project document;

Crooked and Indian Rivers, Michigan: House Document Numbered 142, Eighty-second Congress, at an estimated cost of $225,000;

Toledo Harbor, Ohio: House Document Numbered 620, Eighty-first Congress, at an estimated cost of $512,000;

Erie Harbor, Pennsylvania: House Document Numbered 345, Eighty-third Congress, at an estimated cost of $174,000;

Black Rock Channel and Tonawanda Harbor, New York: House Document Numbered 423, Eighty-third Congress, at an estimated cost of $270,000;

Little River at Cayuga Island, Niagara Falls, New York: House Document Numbered 246, Eighty-third Congress, at an estimated cost of $36,900;

Oswego Harbor, New York: House Document Numbered 487, Eighty-first Congress, at an estimated cost of $2,459,000;

Los Angeles and Long Beach Harbors, California: House Document Numbered 161, Eighty-third Congress, at an estimated cost of $896,500: *Provided*, That the Secretary of the Army is hereby authorized to reimburse local interests for such work as they may have done upon this project prior to July 1, 1953, at actual cost to local interests insofar as the same shall be approved by the Chief of Engineers and found to have been done in accordance with the project hereby adopted: *Provided further*, That such reimbursement shall be subject to appropriations applicable thereto or funds available therefor and shall not take precedence over other pending projects of higher priority for harbor improvement: *And provided further*, That such payments shall not exceed the sum of $500,000;

Playa del Rey Inlet and Harbor, Venice, California: House Document Numbered 389, Eighty-third Congress: *Provided*, That Federal participation in the provision of entrance jetties, entrance channel, interior channel and central basin recommended in the project report and presently estimated to cost $7,738,000 shall not exceed 50 per centum of the cost thereof;

Port Hueneme, California: House Document Numbered 362, Eighty-third Congress, at an estimated cost of $5,437,000;

Rogue River, Harbor at Gold Beach, Oregon: Senate Document Numbered 83, Eighty-third Congress, at an estimated cost of $3,758,700;

Umpqua Harbor and River, Scholfield River at Reedsport, Oregon: Senate Document Numbered 133, Eighty-first Congress, at an estimated cost of $41,000;

Columbia River at the mouth, Oregon and Washington: House Document Numbered 249, Eighty-third Congress, at an estimated cost of $8,555,000;

Columbia River between Chinook, Washington, and the head of Sand Island: Senate Document Numbered 8, Eighty-third Congress, at an estimated cost of $227,100;

Willapa River and Harbor and Naselle River, Washington: House Document Numbered 425, Eighty-third Congress, at an estimated cost of $977,000;

Grays Harbor and Chehalis River, Washington: House Document Numbered 412, Eighty-third Congress, at an estimated cost of $421,800;

Grays Harbor and Chehalis River (Westhaven Breakwater), Washington: House Document Numbered ——, Eighty-third Congress, at an estimated cost of $323,700;

Anacortes Harbor, Washington: Senate Document Numbered 102, Eighty-third Congress, at an estimated cost of $179,300;

Neah Bay, Washington: House Document Numbered 404, Eighty-third Congress, at an estimated cost of $139,250;

Bellingham Harbor, Washington: House Document Numbered 558, Eighty-second Congress, at an estimated cost of $1,366,650;

Blaine Harbor, Washington: House Document Numbered 240, Eighty-third Congress, at an estimated cost of $436,000;

Shilshole Bay, Seattle, Washington: House Document Numbered 536, Eighty-first Congress, at an estimated cost of $3,397,300;

Port Angeles Harbor, Washington: House Document Numbered 155, Eighty-second Congress, at an estimated cost of $477,900;

Everett Harbor and Snohomish River, Washington: House Document Numbered 569, Eighty-first Congress, at an estimated cost of $395,500;

Quillayute River, Washington: House Document Numbered 579, Eighty-first Congress, at an estimated cost of $425,550;

Seward Harbor, Alaska: House Document Numbered 182, Eighty-third Congress, at an estimated cost of $81,200;

Valdez Harbor, Alaska: House Document Numbered 182, Eighty-third Congress, at an estimated cost of $116,600;

Honolulu Harbor, Territory of Hawaii: House Document Numbered 717, Eighty-first Congress, at an estimated cost of $3,022,000;

BEACH EROSION

Hampton Beach, New Hampshire: House Document Numbered 325, Eighty-third Congress, at an estimated cost of $140,000;

Lynn-Nahant Beach, Massachusetts: House Document Numbered 134, Eighty-second Congress, at an estimated cost of $189,000;

Revere Beach, Massachusetts: House Document Numbered 146, Eighty-second Congress, at an estimated cost of $402,900;

Quincy Shore Beach, Massachusetts: House Document Numbered 145, Eighty-second Congress, at an estimated cost of $409,000;

South Shore, State of Rhode Island: House Document Numbered 490, Eighty-first Congress, at an estimated cost of $166,550;

Hammonassett River to East River (Area 2), Connecticut: House Document Numbered 474, Eighty-first Congress, at an estimated cost of $166,600 for Hammonassett Beach; $20,400 for Middle Beach;

New Haven Harbor to Housatonic River (Area 3), Connecticut: House Document Numbered 203, Eighty-third Congress, at an estimated cost of $84,600 for Prospect Beach; $42,400 for Woodmont Shore; $13,100 for Gulf Beach; and $18,300 for Silver Beach to Cedar Beach;

Housatonic River to Ash Creek (Area 7), Connecticut: House Document Numbered 248, Eighty-third Congress, at an estimated cost of $26,500 for Short Beach; and $119,000 for Seaside Park;

Atlantic City, New Jersey: House Document Numbered 538, Eighty-first Congress, at an estimated cost of $2,044,000;

Ocean City, New Jersey: House Document Numbered 184, Eighty-third Congress, at an estimated cost of $105,000;

Cold Spring Inlet (Cape May Harbor), New Jersey: House Document Numbered 206, Eighty-third Congress, at an estimated cost of $260,000;

Virginia Beach, Virginia: House Document Numbered 186, Eighty-third Congress, at an estimated cost of $525,514;

Pinellas County, Florida: House Document Numbered 380, Eighty-third Congress, at an estimated cost of $34,300;

Illinois Shore of Lake Michigan: House Document Numbered 28, Eighty-third Congress, at an estimated cost of $1,176,400;

Vermilion to Sheffield Lake Village, Ohio: House Document Numbered 229, Eighty-third Congress, at an estimated cost of $185,000;

Cleveland and Lakewood, Ohio: House Document Numbered 502, Eighty-first Congress, at an estimated cost of $1,275,000 for Edgewater Park; and $68,900 for White City Park;

Presque Isle Peninsula, Erie, Pennsylvania: House Document Numbered 231, Eighty-third Congress, at an estimated cost of $2,006,000;

Selkirk Shores State Park, Lake Ontario, New York: House Document Numbered 343, Eighty-third Congress, at an estimated cost of $136,500;

Point Mugu to San Pedro Breakwater, California: House Document Numbered 277, Eighty-third Congress, at an estimated cost of $3,874,000;

Anaheim Bay Harbor, California: House Document Numbered 349, Eighty-third Congress, at an estimated cost of $65,700 for Seal Beach; and $91,600 for Surfside;

Carpenteria to Point Mugu, California: House Document Numbered 29, Eighty-third Congress, at an estimated cost of $73,700;

Waikiki Beach, Territory of Hawaii: House Document Numbered 227, Eighty-third Congress, at an estimated cost of $283,700.

SEC. 102. The Secretary of the Army is hereby authorized to reimburse local interests for such work done by them on the beach erosion projects authorized in section 101, subsequent to the initiation of the cooperative studies which form the basis for the projects: *Provided*, That the work which may have been done on these projects was approved by the Chief of Engineers as being in accordance with the projects hereby adopted: *Provided further*, That such reimbursement shall be subject to appropriations applicable thereto for funds available therefor and shall not take precedence over other pending projects of higher priority for improvements.

SEC. 103. The Secretary of the Army is hereby authorized and directed to cause a preliminary examination and survey to be made to determine the need for a channel from the Gulf of Mexico into Choctawatchee Bay, Florida, in the vicinity of Point Washington, subject to all applicable provisions of section 110 of the River and Harbor Act of 1950.

SEC. 104. The consent of Congress is hereby granted to the city of Mobile, Alabama, and the State of Alabama, their successors and assigns, for the closing of Garrows Bend Channel, in the county of Mobile, Alabama, by the construction and operation of an earth-filled causeway across said channel in the county of Mobile, in the State of Alabama: *Provided*, That the work on said causeway shall not be commenced until the plans and location therefor have been filed with and approved by the Chief of Engineers, United States Army, and by the Secretary of the Army. This provision shall be null and void unless the actual construction of the causeway hereby authorized is commenced within three years and completed within five years from the date of this Act and the right to alter, amend, or repeal this provision is hereby expressly reserved.

SEC. 105. Title I may be cited as the "River and Harbor Act of 1954".

TITLE II—FLOOD CONTROL

SEC. 201. That section 3 of the Act approved June 22, 1936 (Public, Numbered 738, Seventy-fourth Congress), as amended by section 2 of the Act approved June 28, 1938 (Public, Numbered 761, Seventy-fifth Congress), shall apply to all works authorized in this title except that for any channel improvement or channel rectification project, provisions (a), (b), and (c) of section 3 of said Act of June 22, 1936, shall apply thereto, and except as otherwise provided by law: *Provided*, That the authorization for any flood-control project herein adopted requiring local cooperation shall expire five years from the date on which local interests are notified in writing by the Department of the Army of the requirements of local cooperation, unless said interests shall within said time furnish assurances satisfactory to the Secretary of the Army that the required cooperation will be furnished.

SEC. 202. The provisions of section 1 of the Act of December 22, 1944 (Public Numbered 534, Seventy-eighth Congress, second session), shall govern with respect to projects authorized in this Act, and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto shall apply as if herein set forth in full.

It is hereby declared to be the policy of the Congress that the following provisions shall be observed:

No project or any modification not authorized, of a project for flood control or rivers and harbors, shall be authorized by the Congress unless a report for such project or modification has been previously submitted by the Chief of Engineers, United States Army, in conformity with existing law.

SEC. 203. The following works of improvement for the benefit of navigation and the control of destructive floodwaters and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and the supervision of the Chief of Engineers in accordance with the plans in the respective reports hereinafter designated and subject to the conditions set forth therein: *Provided*, That the necessary plans, specifications, and preliminary work may be prosecuted on any project authorized in this title with funds from appropriations heretofore or hereafter made for flood control so as to be ready for rapid inauguration of a construction program: *Provided further*, That the projects authorized herein shall be initiated as expeditiously and prosecuted as vigorously as may be consistent with budgetary requirements: *And provided further*, That penstocks and other similar facilities adapted to possible future use in the development of hydroelectric power shall be installed in any dam authorized in this Act for construction by the Department of the Army when approved by the Secretary of the Army on the recommendation of the Chief of Engineers and the Federal Power Commission.

CONNECTICUT RIVER BASIN

That the plan for the control of floods in the Connecticut River Basin, approved by the Act of June 22, 1936 (Public Law Numbered 738, Seventy-fourth Congress), as amended and supplemented, is hereby modified to provide for the construction, under the direction of the Secretary of the Army and the supervision of the Chief of Engineers, of a flood control reservoir on Otter Brook at South Keene, New Hampshire, in lieu of any reservoir or reservoirs heretofore authorized.

That the plan for the West River Basin of the Connecticut River in Vermont is hereby modified to consist of three reservoirs at the Ball Mountain, The Island, and Townshend sites, in lieu of the plan of eight reservoirs authorized in section 10 of the Flood Control Act approved December 22, 1944, in general accordance with the plan agreed to by the Secretary of the Army, the Chief of Engineers, and the

Vermont State Water Conservation Board in June 1950; and the conditions specified in the plan of the eight reservoirs authorized in section 10 of the Flood Control Act approved December 22, 1944, shall not apply.

SUSQUEHANNA RIVER BASIN

The project for the Susquehanna River in the vicinity of Endicott, Johnson City, and Vestal, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 500, Eighty-first Congress, at an estimated cost of $4,469,000.

CENTRAL AND SOUTHERN FLORIDA

The authorization for the comprehensive plan for flood control and other purposes in central and southern Florida given by the Flood Control Act of June 30, 1948, as amended, is hereby modified and expanded to include the entire comprehensive plan of improvement as recommended by the Chief of Engineers in House Document Numbered 643, Eightieth Congress, with such modifications thereof as the Congress may hereafter authorize, or as in the discretion of the Chief of Engineers may be advisable: *Provided*, That the conditions of local cooperation for the authorized first phase heretofore approved by said flood control Act shall apply to that authorized first phase, but for all work over and beyond that previous authorization such conditions shall apply on an interim basis only until they shall be modified as deemed appropriate by the Congress, based on recommendations to be submitted at the earliest practicable date by the Chief of Engineers through the Bureau of the Budget to the Congress: *Provided further*, That whatever conditions of local cooperation are established by Congress as the result of such recommendations shall be retroactive to any units of the comprehensive plan authorized in this Act which may be started prior to establishment of the exact conditions of local cooperation: *And provided further*, That in addition to previous authorizations there is hereby authorized to be appropriated the sum of $7,000,000 for partial accomplishment of said plan.

LOWER MISSISSIPPI RIVER

The project for flood control and improvement of the lower Mississippi River, adopted by the Act of May 15, 1928, as amended and modified, is hereby further modified and expanded to include the following items of work and the authorization for said project is increased accordingly.

(a) Control of Old and Atchafalaya Rivers and a lock for navigation substantially as set forth in section XIII of the report of the Mississippi River Commission dated February 2, 1954, as concurred in by the report of the Chief of Engineers dated April 8, 1954, with such modifications as the Chief of Engineers in his discretion may find advisable at an estimated additional cost (exclusive of the navigation lock) of $32,000,000, in addition to the $15,000,000 increase in authorization made by subparagraph (a) under the title "Lower Mississippi River" in section 204 of the Flood Control Act, approved May 17, 1950, which $15,000,000 shall be applied to the item described in this paragraph: *Provided*, That the United States shall acquire such lands, rights-of-way and spoil-disposal areas as may be necessary for construction of the project except that local interests shall comply with the provisions of section 3 of the Flood Control Act approved May 15, 1928, as amended, with regard to the enlargement and extension of the main line Mississippi River levee below Shaw, Louisiana: *Provided further*, That no flowage rights are to be acquired by the United States in connection with this item: *And provided further*, That when the type and dimensions of the required navigation lock are approved by the Chief of Engineers, construction thereof may be initiated with funds herein authorized to be appropriated.

(b) The plan for an adequate channel from the Mississippi River via Old and Atchafalaya Rivers to Morgan City, Louisiana, substantially in accordance with the report of the Chief of Engineers in Senate Document Numbered 53, Eighty-second Congress, at an estimated additional cost of $440,000.

(c) Modification of the authorized project for the Vicksburg-Yazoo area substantially in accordance with the report of the Chief of Engineers in House Document Numbered 85, Eighty-third Congress.

(d) Modification of the authorized project for the New Madrid Floodway substantially in accordance with the recommendation of the Chief of Engineers in House Document Numbered 183, Eighty-third Congress, at an estimated cost of $1,743,000.

BUFFALO BAYOU BASIN, TEXAS

The project for Buffalo Bayou and tributaries, to provide flood protection for the city of Houston, Texas, as authorized by the Flood Control Act approved August 11, 1939, and previous Acts, is hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 250, Eighty-third Congress, at an additional estimated cost of $16,191,600.

BRAZOS RIVER BASIN, TEXAS

The plan for flood protection and other purposes on the Brazos River and tributaries, Oyster Creek and Jones Creek, Texas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 535, Eighty-first Congress, and there is hereby authorized to be appropriated the sum of $40,000,000 for partial accomplishment of that plan.

GUADALUPE AND SAN ANTONIO RIVERS, TEXAS

The project for flood protection on the Guadalupe and San Antonio Rivers, Texas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 344, Eighty-third Congress, at an estimated cost of $30,254,000.

GUADALUPE RIVER, TEXAS

The works of improvement on Guadalupe River, Texas, authorized by section 2 of the Act entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes", approved March 2, 1945 (59 Stat. 17), insofar as such authorization provides for construction of the Canyon Dam and Reservoir, is hereby modified to provide for the construction, operation, and maintenance under the direction of the Secretary of the Army and supervision of the Chief of Engineers of the Canyon Dam and Reservoir in accordance with the provisions of this Act. The Canyon Dam and Reservoir shall be constructed with a gross reservoir capacity of approximately seven hundred and fifty thousand acre-feet (of which three hundred and eighty thousand acre-feet shall be for flood control and sedimentation) for purposes of flood control, conservation, stream-flow regulation, and provision for sedimentation, and, if practicable, for purposes of development of electric power, at an estimated total cost of $13,300,000.

The Chief of Engineers, in consultation with the Federal Power Commission, shall at appropriate times allocate to local interests such of the costs of construction, operation, and maintenance of the Canyon Dam and Reservoir as may appropriately be allocated to water conservation, stream-flow regulation, and development of electric power. Such allocation shall be made in accordance with the separable costs-remaining benefits method, taking into account the net increase in regulated flow which is practical with the storage capacity which will be provided by the Canyon Dam and Reservoir for water conservation and stream-flow regulation. No allocation of costs with respect to any installation for development of electric power shall be made under this section unless the Chief of Engineers determines that such installation will actually be constructed.

The costs allocated to local interests under this section shall be not less than $1,400,000, and shall be paid by them to the Chief of Engineers as provided in this Act. The portion of such costs determined by the Chief of Engineers to be allocable to operation and maintenance of Canyon Dam and Reservoir shall be deposited to the credit of the appropriation available for maintenance and operation of such dam and used by the Chief of Engineers for such operation and maintenance; the $1,400,000 to be contributed during the construction period shall be deposited to the credit of the appropriation available for construction of the dam and used by the Chief of Engineers for that purpose; and the balance of such costs determined by the Chief of Engineers to be allocable to construction of Canyon Dam and Reservoir shall be deposited in the Treasury of the United States.

Facilities for the development of electric power at Canyon Dam and Reservoir may be constructed and operated by the Corps of Engineers, or by local interests in accordance with the provisions of the Federal Power Act and in accordance with this Act, with all expenses of construction, operation, and maintenance of such facilities to be paid by local interests and with such power to be made available to such local interests.

Of the contributions to be paid by local interests toward the cost of construction of Canyon Dam and Reservoir, $1,400,000 shall be paid in such manner, and at

such time or times during the period of such construction, as the Chief of Engineers shall determine. The remainder of the contributions allocated to local interests under section 2, with interest thereon at the rate of 2½ per centum per annum, shall be paid as prescribed by the Chief of Engineers over a period not in excess of fifty years.

The Chief of Engineers shall enter into an agreement with local interests providing for the payments heretofore described and for all other matters relating to the operation and maintenance of the Canyon Dam and Reservoir which require the cooperation of local interests. Such agreement may provide for utilization of the water impounded for water conservation and stream-flow regulation for development of electric power; except that the agreement shall provide that the utilization of water for power development shall not be allowed to conflict with the flood-control and sedimentation purposes of the Canyon Dam and Reservoir.

RIO GRANDE BASIN

The project for flood protection in the Rio Grande Basin at Albuquerque, New Mexico, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 464, Eighty-third Congress, at an estimated cost of $7,500,000.

The project for flood protection on the Rio Hondo River at Roswell, New Mexico, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 436, Eighty-third Congress, at an estimated cost of $5,658,000.

WHITE RIVER BASIN

The general comprehensive plan for flood control and other purposes for the White River Basin approved by the Flood Control Act of June 28, 1938, as amended, is hereby modified to provide for the generation of power in conjunction with flood control at the Greers Ferry Reservoir and the addition of Beaver Reservoir for flood control, power generation, and other purposes, substantially as recommended by the Chief of Engineers in his report dated February 19, 1954.

ARKANSAS RIVER BASIN

The project for flood protection on the Arkansas River and tributaries at Enid, Oklahoma, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 185, Eighty-third Congress, at an estimated cost of $965,000.

UPPER MISSISSIPPI RIVER

The project for flood protection on the Mississippi River in urban areas at Alton, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 397, Eighty-third Congress, at an additional estimated cost of $2,500,000.

The project for flood protection on the Mississippi River, Guttenberg, Iowa, to Hamburg Bay, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 281, Eighty-third Congress, excepting only the improvements recommended for Credit Island and for Henderson County Drainage District No. 3, at an estimated cost for improvements authorized of $30,551,000.

The project for flood protection on the Mississippi River, Fish Lake Drainage and Levee District No. 8, Monroe County, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 396, Eighty-third Congress, at an additional estimated cost of $480,000.

The project on the Mississippi River for local flood protection in the Sny Island Levee Drainage District, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 247, Eighty-third Congress, at an estimated cost of $7,046,300.

The project for flood protection on the Upper Iowa River, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 375, Eighty-third Congress, at an estimated cost of $979,600.

MISSOURI RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $144,000,000 for the prosecution of the comprehensive plan for the Missouri River Basin to be undertaken by the Corps of Engineers, approved by the Act of June 28, 1938, as amended and supplemented by subsequent Acts of Congress.

The comprehensive plan for the Missouri River Basin, approved by the Act of June 28, 1938, and as amended and supplemented, is hereby further modified to include the project for flood protection on the Kansas River and tributaries, Colorado, Nebraska and Kansas substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 642, Eighty-first Congress, at an estimated additional cost of $73,710,000, and there is authorized to be appropriated such sum in addition to previous authorizations for the Missouri Basin plan.

The comprehensive plan for the Missouri River Basin, approved by the Act of June 28, 1938, and as amended and supplemented, is hereby further modified to include the project for flood protection on the Osage River and tributaries, Missouri and Kansas, substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 549, Eighty-first Congress.

The project adopted by the Flood Control Act of June 22, 1936, to provide flood protection for the Kansas Citys, Kansas and Missouri, as modified and extended by the Flood Control Act of December 22, 1944, is hereby further modified to provide that the Chief of Engineers may contribute not to exceed $2,750,000 to the cost of an alternate plan of flood protection to be constructed by local interests in the lower Armourdale area of the Kansas Citys project: *Provided*, That the actual amount so paid by the Federal Government shall not exceed the estimated Federal cost of the approved Government plan of protection in this area nor shall it exceed the total actual costs of the alternate project reduced by the estimated costs for lands, easements, rights-of-way, and public relocations which local interests would have been required to bear had the approved Government plan been constructed: *Provided further*, That the total amount shall be paid in installments during progress of the work to satisfactory completion of the alternate plan.

The project for flood protection on the Chariton River, Iowa and Missouri, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 561, Eighty-first Congress, at an estimated cost of $19,612,000.

The project for flood protection on the Little Sioux River, Iowa, authorized by the Act of August 4, 1947, is hereby modified and supplemented substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 127, Eighty-third Congress, at an additional estimated cost of $10,076,000.

The project for flood protection on the Little Missouri River and tributaries at Marmarth, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 134, Eighty-first Congress, at an estimated cost of $212,300.

COAL CREEK AND TRIBUTARIES, TENNESSEE

The project for flood protection on Coal Creek and tributaries, Tennessee, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 154, Eighty-second Congress, at an estimated cost of $745,200.

OHIO RIVER BASIN

The project for flood protection on Sandy Lick Creek at and in the vicinity of Reynoldsville, Pennsylvania, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 716, Eighty-first Congress, at an estimated cost of $570,000.

The project for flood control and related purposes on the Paint Rock River, Alabama, is hereby authorized substantially as recommended by the Chief of Engineers in House Document Numbered, Eighty-third Congress, at an estimated cost of $1,001,300: *Provided*, That in lieu of the local cooperation recommended in that document, local interests shall comply with the provisions of local cooperation contained in section 3 of the Flood Control Act approved June 22, 1936, as amended, and shall also construct and maintain local drainage works

required to fully and effectively utilize the improved outlet system, generally as outlined in House Document Numbered , Eighty-third Congress.

KALAMAZOO RIVER, MICHIGAN

The project for flood protection on the Kalamazoo River at Battle Creek, Michigan, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 98, Eighty-third Congress, at an estimated cost of $4,201,550: *Provided*, That local contribution toward the project will be in accord with the recommendation of the Secrteary of the Army contained in the aforesaid document.

LITTLE CALUMET RIVER, INDIANA

The project for flood protection on the Little Calumet River and tributaries, Indiana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 153, Eighty-second Congress, at an estimated cost of $509,900.

LOS ANGELES RIVER BASIN

In addition to previous authorizations there is hereby authorized to be appropriated the sum of $12,500,000 for the prosecution of the comprehensive plan for the Los Angeles-San Gabriel River Basin, and Ballona Creek, California, approved in the Act of August 18, 1941, as amended and supplemented by subsequent Acts of Congress.

SACRAMENTO RIVER BASIN

The project for flood protection on Middle Creek, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 367, Eighty-first Congress, at an estimated cost of $1,110,000.

The plan of improvement for flood control on the American River, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 367, Eighty-first Congress, at an estimated cost of $1,600,000 for levees.

LOWER SAN JOAQUIN RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $5,000,000 for the prosecution of the comprehensive plan for the Lower San Joaquin River Basin, California, approved in the Act of December 22, 1944, as amended and supplemented by subsequent Acts of Congress.

COLUMBIA RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $180,000,000 for the prosecution of the projects and plans for the Columbia River Basin, for which the sum of $75,000,000 was authorized in the Flood Control Act approved May 17, 1950, and these projects and plans are hereby modified to include power development in the following projects in tributary basins, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 531, Eighty-first Congress: Cougar Reservoir on South Fork of McKenzie River, Oregon, and Green Peter Reservoir on Middle Fork of Santiam River, Oregon, including White Bridge reregulating reservoir on Middle Fork of Santiam River, Oregon.

TERRITORY OF ALASKA

The project for flood protection on Gold Creek and tributaries, Alaska, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 54, Eighty-second Congress, at an estimated cost of $380,000.

TERRITORY OF HAWAII

The project for flood protection on the Wailoa Stream and its tributaries, Island of Hawaii, Territory of Hawaii, is hereby authorized substantially in

accordance with the recommendations of the Chief of Engineers, in House Document Numbered 529, Eighty-first Congress, at an estimated cost of $347,000.

SEC. 204. The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys for flood control and allied purposes, including channel and major drainage improvements, and floods aggravated by or due to wind or tidal effects, to be made under the direction of the Chief of Engineers, in drainage areas of the United States and its Territorial possessions, which include the following-named localities: *Provided*, That after the regular or formal reports made on any examination, survey, project, or work underway or proposed are submitted to Congress, no supplemental or additional report or estimate shall be made unless authorized by law except that the Secretary of the Army may cause a review of any examination or survey to be made and a report thereon submitted to Congress if such review is required by the national defense or by changed physical or economic conditions: *Provided further*, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or harbor mentioned in this title until the project for the proposed work shall have been adopted by law:

Ipswich River, Massachusetts.

Neponset River, Massachusetts.

Juniata River at Lewistown and other points in Pennsylvania in the interest of flood control.

Streams in the vicinity of Alice, Texas.

Redwood Creek, Humboldt County, California.

Coos Bay, Oregon.

SEC. 205. In addition to previous authorizations, the sum of $20,000,000 is hereby authorized to be appropriated for expenditure by the Department of Agriculture for the prosecution of the works of improvement authorized to be carried out by that Department by the Flood Control Act of December 22, 1944, as amended.

SEC. 206. That section 7 of the Act approved August 18, 1941 (Public, Numbered 228, Seventy-seventh Congress), as amended by section 5 of the Act approved July 24, 1946 (Public, Numbered 526, Seventy-ninth Congress), as further amended by the Act approved June 16, 1953 (Public, Numbered 60, Eighty-third Congress), is hereby still further amended to read as follows:

"That 75 per centum of all moneys received and deposited in the Treasury of the United States during any fiscal year on account of the leasing of lands acquired by the United States for flood control, navigation, and allied purposes, including the development of hydroelectric power, shall be paid at the end of such year by the Secretary of the Treasury to the State in which such property is situated, to be expended as the State legislature may prescribe for the benefit of public schools and public roads of the county, or counties, in which such property is situated, or for defraying any of the expenses of county government in such county or counties, including public obligations of levee and drainage districts for flood control and drainage improvements: *Provided*, That when such property is situated in more than one State or county, the distributive share to each from the proceeds of such property shall be proportional to its area therein."

SEC. 207. That section 8 of the Flood Control Act approved June 28, 1938, is hereby amended to read as follows:

"That there is hereby authorized an expenditure as required, from any appropriations heretofore or hereafter made for flood control, rivers and harbors, and related purposes by the United States, for the establishment, operation, and maintenance by the Weather Bureau of a network of recording and nonrecording precipitation stations, known as the Hydroclimatic Network, whenever in the opinion of the Chief of Engineers and the Chief of the Weather Bureau such service is advisable in connection with either preliminary examinations and surveys or works of improvement authorized by the law for flood control, rivers and harbors, and related purposes, and the Secretary of the Army upon the recommendation of the Chief of Engineers is authorized to allot the Weather Bureau funds for said expenditure."

SEC. 208. That section 2 of the Flood Control Act of August 28, 1937, as amended by section 13 of the Flood Control Act of July 24, 1946, is hereby further amended to read as follows:

"That the Secretary of the Army is hereby authorized to allot not to exceed $2,000,000 from any appropriations heretofore or hereafter made for any one fiscal year for flood control, for removing accumulated snags and other debris, and clearing and straightening the channel in navigable streams and tributaries

thereof, when in the opinion of the Chief of Engineers such work is advisable in the interest of flood control: *Provided*, That not more than $100,000 shall be expended for this purpose for any single tributary from the appropriations for any one fiscal year."

SEC. 209. That, subject to the procedures prescribed by section 505 of the Classification Act of 1949, but without regard to the numerical limitations contained therein, there shall be established in the civil works activities under the jurisdiction of the Chief of Engineers, seven positions to be placed in grade GS–16 and two positions to be placed in grade GS–17, in the General Schedule established by that Act.

SEC. 210. That section 4 of the Act approved July 24, 1946 (Public, Numbered 526, Seventy-ninth Congress), is amended to read as follows:

"The Chief of Engineers, under the supervision of the Secretary of the Army, is authorized to construct, maintain, and operate public park and recreational facilities in reservoir areas under the control of the Department of the Army, and to permit the construction, maintenance, and operation of such facilities. The Secretary of the Army is also authorized to grant leases of lands, including structures or facilities thereon, in reservoir areas for such periods, and upon such terms and for such purposes as he may deem reasonable in the public interest: *Provided* That leases to nonprofit organizations for park or recreational purposes may be granted at reduced or nominal considerations in recognition of the public service to be rendered in utilizing the leased premises. *Provided further*, That preference shall be given to Federal, State, or local governmental agencies, and licenses, or leases where appropriate, may be granted without monetary considerations, to such agencies for the use of all or any portion of a reservoir area for any public purpose, when the Secretary of the Army determines such action to be in the public interest, and for such periods of time and upon such conditions as he may find advisable: *And provided further*, That in any such lease or license to a Federal, State, or local governmental agency which involves lands to be utilized for the development and conservation of fish and wildlife, forests, or other natural resources, the licensee or lessee may be authorized to cut timber and harvest crops as may be necessary to further such beneficial uses and to collect and utilize the proceeds of any sales of timber and crops in the development, conservation, maintenance, and utilization of such lands. Any balance of proceeds not so utilized shall be paid to the United States at such time or times as the Secretary of the Army may determine appropriate. The water areas of all such reservoirs shall be open to public use generally, without charge, for boating, swimming, bathing, fishing, and other recreational purposes, and ready access to and exit from such water areas along the shores of such reservoirs shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest, all under such rules and regulations as the Secretary of the Army may deem necessary. No use of any area to which this section applies shall be permitted which is inconsistent with the laws for the protection of fish and game of the State in which such area is situated. All moneys received by the United States for leases or privileges shall be deposited in the Treasury of the United States as miscellaneous receipts."

SEC. 211. Title II may be cited as the "Flood Control Act of 1954".

Senator BUSH. Because we have very little time left in this session, it is the suggestion of the chairman that witnesses will hold their remarks down to the minimum as far as time is concerned.

This does not apply, I might say, to the Army, but other witnesses who may come in, so that we can finish up these hearings and go into executive session and perhaps get this bill on the floor in time that we can act on it before we get out of here.

I think time is of the essence and, for that reason, if there is no objection in the committee, I propose to go right through with these hearings this week and finish this week and have an executive meeting as early as possible next week and get the bill on the floor and see if we can pass it next week.

General Itschner, I understand you have a short statement you would like to make at the outset.

General ITSCHNER. Yes, sir.

Senator BUSH. All right: you may proceed.

STATEMENT OF BRIG. GEN. E. C. ITSCHNER, ACCOMPANIED BY COL. WILLIAM WHIPPLE, EXECUTIVE OFFICER, CIVIL WORKS DIVISION, IN CHARGE OF MULTIPLE-PURPOSE PROJECTS; COL. A. D. STARBIRD, ASSISTANT CHIEF OF CIVIL WORKS, FLOOD CONTROL; COL. JOHN U. ALLEN, ASSISTANT CHIEF OF CIVIL WORKS, RIVERS, AND HARBORS AND BEACH EROSION; J. R. BRENNAN, CHIEF, PROJECT DEVELOPMENT BRANCH; AND J. F. VAN VLADRICKEN, ADMINISTRATIVE ASSISTANT TO MR. BRENNAN, ALL FROM OFFICE, CHIEF OF ENGINEERS, CIVIL WORKS DIVISION, UNITED STATES ARMY

General ITSCHNER. Mr. Chairman, first I would like to express our pleasure in having the opportunity of appearing before this committee. At the same time I convey to you the regrets of our Chief of Engineers, Gen. Samuel D. Sturgis, Jr., that he is unable to attend the opening of your hearings because of a 3 weeks' absence from Washington. However, he will return to his office the early part of next week and he will be available upon call at that time.

With your permission, I would like to introduce the persons who will testify for the Corps of Engineers at these hearings.

Colonel Whipple is the executive officer for civil works and is in charge of multiple-purpose projects.

Senator BUSH. I know the colonel.

General ITSCHNER. Colonel Starbird is the Assistant Chief of Civil Works for Flood Control.

Colonel Allen is the Assistant Chief of Civil Works for river and harbor and beach erosion projects.

Mr. Brennan is the Chief of Projects Development Branch. Mr. Van Vladricken is his Administrative Assistant.

I would like to make a few opening remarks for the purpose of affording the members of the committee a better understanding of the proposed bill. The statement will be brief in consideration of the large amount of work that the committee members must accomplish within a short period of time.

This omnibus river and harbor and flood control bill is the first since the act of May 17, 1950. A period of 4 years has thus elapsed since the last omnibus bill, longer than the intervening time between any preceding omnibus bills. As a consequence, a great number of projects are eligible for consideration.

This bill was favorably reported by the House Public Works Committee on July 15, 1954. It is anticipated it will come up on the floor of the House either today or in the very near future.

The total amount of the bill, as reported by the House committee, is $890,271,514.

The number of projects and the breakdown of the cost among river and harbor, beach erosion, flood control is:

River and harbor—85 projects, costing $212,915,100.
Beach erosion—22 projects, costing $14,003,664.
Flood control—39 projects, costing $663,352,750, including $20,000,000 for the Department of Agriculture.

That amounts to a total of 146 projects, costing, as previously stated, $890,271,514.

At this time 25 projects, at a cost of approximately $124 million, are scheduled for hearing by your committee. Most of these projects were not heard by the House, only because reports on them were not completed in time to receive House committee consideration. It is obvious, therefore, that the delay in hearing these projects should not be construed as being in any way any reflection on the merit of the projects.

That concludes my brief statement, Mr. Chairman.

Senator BUSH. Thank you very much for that statement, General. The committee is very glad to have it; and, of course, we are very glad to welcome your colleagues before this committee.

General ITSCHNER. Thank you, sir.

Senator BUSH. Now, the first item on our agenda has to do with San Lorenzo Creek.

Senator Kuchel, you are interested in this project. How would you like to proceed?

Senator KUCHEL. I have a fairly voluminous file on all of these items pertaining to California.

In the interest of time, if you have available, Mr. Bassett, the memoranda you showed me last week, perhaps the easiest and quickest way to dispose of those items would be for the staff to make a very short statement.

As you can see there, Mr. Chairman, I have enough detail on them to keep you here all day.

Senator BUSH. Yes. That isn't quite what we want.

Senator KUCHEL. Then, if the chairman will permit, I would like to put in the record the mimeographed statement I have before me—the chairman has a copy of it—which highlights the San Lorenzo project.

Senator BUSH. Without objection, it is so ordered.

(The statement referred to is as follows:)

SAN LORENZO CREEK, ALAMEDA COUNTY, CALIF.

(H. Doc. 452, 83d Cong.)

Location: A small watershed in foothills of Coast Range Mountains on east side of San Francisco Bay. The stream flows through the town of Hayward and enters the bay 10 miles southeast of Oakland. The basin above Hayward has a drainage area of 45 square miles.

Report authorized by: Resolution adopted by the House Committee on Flood Control, May 14, 1945.

Existing project: None.

Plan of recommended improvement: Channel improvements, levees, and appurtenant works on San Lorenzo Creek in Hayward.

Estimated cost:

	Federal	Non-Federal	Total
Report (December 1952)	$3,644,000	$631,000	$4,275,000
Current (October 1953)	3,790,000	656,000	4,446,000

Local cooperation: Furnish all lands, easements, and rights-of-way; make necessary bridge and utility alterations; hold and save United States free of damages; maintain and operate completed project, preventing encroachment on the channel; contribute in cash 2.6 percent of the cost of construction, presently estimated at $96,000.

Project economics:

	Report	Current
Annual charges:		
Federal interest and amortization	$129,000	$129,400
Non-Federal	36,700	44,400
Total	165,700	173,800
Annual benefits:		
Flood control	179,200	247,500
Land enhancement	11,000	15,200
Bridge replacement	3,000	3,000
Total	193,200	265,700
Benefit-cost ratio	1.17	1.52

Comments of the Bureau of the Budget: No objection to the submission of the report to Congress.

Senator BUSH. Did the Army wish to be heard on this particular matter?

General ITSCHNER. Mr. Chairman, I would like to call upon Colonel Starbird, if I may, to explain the project very briefly to you.

Senator BUSH. Colonel Starbird.

Colonel STARBIRD. Knowing how short of time you are——

Senator BUSH. Well, if you can, we would like to have a 5- or 10-minute explanation.

What is the approximate amount involved in this matter?

Colonel STARBIRD. The Federal cost is estimated at $3,644,000.

Senator BUSH. All right; you may proceed, Colonel.

Colonel STARBIRD. Sir, I would suggest if my first presentation is too long or too short that you so indicate and I will adjust thereafter accordingly.

San Lorenzo Creek, as you can see from the small map, cuts across the southern suburban area of Oakland, Calif. The creek is about 20 miles long. It has a drainage area of about 61 square miles.

There are about 40,000 people who live in the relatively small drainage area. About 75 percent of the individuals depend for their income on the outside area, and the men and women commute to the outside area for their businesses.

A resolution in the House in 1945 called for investigation of this basin.

The basin, from the point of view of its problem and the methods of solution, breaks into three separate elements—three thirds. The upper third of the basin section to the east, flows generally through a very mountainous area. The valley is narrow. Though there is some damage there, the development is relatively light and, consequently, the possibility of economic solution could not be found.

The lower two thirds of the valley are shown on this larger scale map.

The lower two thirds break down into one third, extending from just above Foothill Boulevard to the vicinity of Hesperian Boulevard, and another third west of Hesperian.

Above Hesperian the creek has an adequate capacity; has a very, very steep slope. Flooding is brought about by the depositing of erosion materials in the channel, particularly at the various bridge sites.

In the lower one-third, from Hesperian to the west, the river flows across the alluvial fan, where outwash material is deposited. Here the

slope is much less than the slope above. The capacity is very inadequate.

The Corps of Engineers has investigated several solutions. We tried a solution of retaining some of the waters upstream but could not find an economic solution that involved reservoirs. We did find a satisfactory plan that involved channel improvement, levee and bank stabilization on the two lower thirds of the project, and on the lower section of the upper third.

Specifically, from Hesperian Boulevard on west the channel would be enlarged from a minimum capacity of 500 cubic feet per second to take about 10,000 cubic feet per second. That enlargement would involve the construction of low levees on both sides of the river.

From Hesperian Boulevard to just above Foothill Boulevard, the middle third of the river, a reinforced concrete channel would be put in. Above Foothill Boulevard generally only the points of most serious erosion would be covered.

The estimated cost of that plan to the Federal Government is $3,790,000.

Local interest will be expected to pay for land, rights-of-way, and relocation, and the estimated cost to them of such cooperation is $656,000. They will be expected also to make a small cash contribution toward the project to take care of the land enhancement involved.

The benefit to the cost ratio of the project is 1.52 to 1.

The report has been reviewed by the Department of Interior, Agriculture, the State of California, all of whom concur or offer no objection to the report.

The Bureau of the Budget has reviewed the report and offers no objection.

The Secretary of the Army recommends the authorization of this plan.

Senator BUSH. Any questions, Senator?

Senator KUCHEL. No.

Senator BUSH. Senator Stennis.

Senator STENNIS. No questions. Thank you.

Senator BUSH. Thank you very much, Colonel.

Without objection, I submit for the record a statement by Senator William F. Knowland in connection with this project.

(The statement referred to is as follows:)

UNITED STATES SENATE,
COMMITTEE ON APPROPRIATIONS,
July 21, 1954.

Hon. EDWARD MARTIN,
Chairman, Senate Committee on Public Works,
412 Senate Office Building, Washington, D. C.

DEAR MR. CHAIRMAN: Several projects of great importance to California's river and harbor and flood-control program have just been favorably reported to the Congress by the Chief of Engineers. Unfortunately they were not received in the House in time to be included in the omnibus public works bill (H. R. 9859) now under consideration by your committee. I should like to request that the Senate Public Works Committee give its favorable consideration to the following items which I believe should be incorporated into the bill:

1. San Lorenzo Creek, Alameda County. Flood-control work per House Document 452, 83d. Estimated Federal cost $3,790,000.

2. San Lorenzo River, Santa Cruz County. Flood-control work per House Document 447, 83d. Estimated Federal cost $2,665,000.

3. Port of Richmond, Contra Costa County. Harbor improvement per House Document 395, 83d. Estimated Federal cost $2,086,000.

4. Santa Maria River, Santa Barbara County. Flood-control work per House Document 400, 83d. Estimated Federal cost $27,164,000. (Reservoir, $16,982,000; levees and channels $10,182,000.)

In addition to the projects listed above, the House has approved, and I would recommend the committee approve, the following:

Rivers and harbors projects: Los Angeles and Long Beach Harbors, House Document 161, 83d; Playa del Rey Inlet and Harbor, Venice, per House Document 389, 83d; Port Hueneme, House Document 362, 83d.

Beach erosion: Point Mugu to San Pedro breakwater, House Document 277, 83d; Anaheim Bay Harbor, House Document 349, 83d; Carpinteria to Point Mugu, per House Document 29, 83d.

Flood control: Los Angeles River Basin (Flood Control Act 1944, as amended); Sacramento River Basin, House Document 367, 81st; lower San Joaquin River Basin (Flood Control Act 1944, as amended).

Preliminary survey work at Redwood Creek, Humboldt County, Calif.

Your consideration of these approved and recommended projects for California is very much appreciated.

Sincerely yours,

WILLIAM F. KNOWLAND.

Senator STENNIS. Mr. Chairman, may I ask a question?

Senator BUSH. Senator Stennis.

Senator STENNIS. I am sorry I was a little late in getting here, but I know you have a few of those that were too late to get in the House bill. You are going to take those up as you come to them, are you not?

Senator BUSH. Yes, unless there are other plans suggested.

Senator STENNIS. That is all right with me.

Senator BUSH. That was our intention.

Have you any special one you want to take up?

Senator STENNIS. No. I have a little one on here. I just wondered what the the procedure was to be. I had thought we might get to it tomorrow.

Senator BUSH. Tomorrow we have it listed here.

Senator STENNIS. All right.

Senator BUSH. Is there any reason why we can't take it up now?

Senator KUCHEL. I move we take it up now.

Senator STENNIS. No. I am going to have to go to the Armed Services Committee. I just wanted to get your ground plans before I left. I will come back to this meeting as soon as we finish.

Senator BUSH. Thank you very much.

Is there any other comment on the San Lorenzo Creek project?

Senator KUCHEL. I move it be approved and reported to the full committee.

Senator BUSH. I think, Senator, we will have to take that up in executive session, if you don't mind.

We have next the project known as the Santa Maria River, Calif.

Senator KUCHEL. You have that second San Lorenzo River project.

Senator BUSH. Yes; the San Lorenzo River project. I am sorry. That is listed next.

Will you give us an explantion of that, please, sir?

Colonel STARBIRD. The San Lorenzo Valley is a valley of about 137 square miles, located 60 air miles south of San Francisco.

The river is oriented east to west and flows out of the mountainous regions of the coastal range to pour into Monterey Bay.

An item in the Flood Control Act of 1938 directed the investigation of this valley.

In the upper reaches of the valley the river flows through a very, very, narrow, almost gorge-like section.

There is some development in the upper reaches of the valley. However, that development is generally in the interest of lumbering and in the interest of recreation. There is some little agriculture. The major damage, however, occurs in the lower 4 miles of this 30-mile river. Those 4 miles are in the city of Santa Cruz.

A blowup of the lower area is shown on the large-scale map.

The channel capacity of the San Lorenzo through Santa Cruz is about 10,000 cubic feet per second. There have been floods in the past of 26,000 cubic feet per second, 2½ times the channel capacity.

In 1945 there was a flood that flooded over 530 acres within the city proper. That flood did damages of over a half million dollars.

Flooding occurs on the average of about once every 5 years from the San Lorenzo River, and some flooding, with about the same frequency, occurs from Branciforte Creek.

The possibility of upstream reservoirs was here again investigated, but was not found to be economically justified.

The recommended plan in this case is one that will eliminate substantially all damages in the lower reach.

Those damages, incidentally, have an average annual value of about $114,000.

That plan involves levee and channel improvement along the lower 2½ miles of San Lorenzo River and along the lower mile and a quarter of Branciforte Creek.

The total estimated cost of construction of the project is $2,565,000.

In this case there is substantial land enhancement. Therefore, an estimated $227,500 cash contribution is recommended for contribution by the local interests to the Federal Government to take care of a part of the construction itself.

Local interests will be expected, also, to take care of relocations, the furnishing of rights-of-way and the like.

The estimated cost to them of such cooperation is $670,000.

They will be expected to care for maintenance and operation at an estimated $13,000 per year.

The estimated benefit-to-cost ratio was 1.13 to 1 at the time reported. It has advanced, however, and our latest studies indicate the project has a benefit-cost ratio of 1.22 to 1.

The report has been reviewed by the Department of Agriculture and the State of California. California concurred. Agriculture offered no objection to the project.

The Bureau of the Budget reviewed the project and had two comments that are pertinent and should be mentioned:

The first was that the benefit-to-cost ratio was relatively low. Consequently, if the project were authorized, it should be considered as having a low priority, and its benefit-to-cost ratio should be reviewed at the time that construction was undertaken to insure that it was still an economically justified project.

As I have already mentioned, the benefit-to-cost ratio has advanced slightly during the 2 years since the report was completed.

The second comment of the Bureau of the Budget was to the effect that a cash contribution should be required toward the land enhancement that would result.

As I mentioned earlier, a cash contribution in the appropriate amount suggested by the Bureau of the Budget is now recommended by the Secretary of the Army.

Senator BUSH. What is that cash contribution estimated at?

Colonel STARBIRD. It is estimated at $227,500, sir. It is calculated according to a rather complex formula. I won't worry you with the details of that formula.

Senator BUSH. All right.

Is that to come from the city of Santa Cruz?

Colonel STARBIRD. It is, sir.

Senator BUSH. It is from that particular community?

Colonel STARBIRD. Yes, sir, or the State could give it, if the State desires to participate.

Senator STENNIS. Have they agreed to that?

Colonel STARBIRD. They have given informal information to the effect they believe they can take care of it.

We normally do not formalize assurances ahead of the time we go into detailed planning.

Senator STENNIS. My only point is: If it is made a part of the record as to the justification and approval of the project, there ought to be——

Senator BUSH. Some evidence of local interest.

Senator STENNIS. Yes.

Senator KUCHEL. I can supply that just generally, Mr. Chairman, by saying the community involved is one of the famous resort centers of California.

As you see there by the map, it is adjacent to Monterey Bay, and this has been a source of considerable damage in years gone by, and it is my understanding that the local community is particularly interested in cooperating.

I would also like to make as a part of the record the mimeographed statement which the members of the committee have before them.

Senator BUSH. Without objection, the mimeographed statement will be placed in the record.

(The statement referred to is as follows:)

SAN LORENZO RIVER, CALIF.

(H. Doc. 447, 83d Cong.)

Location: San Lorenzo River rises in the Santa Cruz Mountains and flows southeasterly about 20 miles to Monterey Bay. The drainage basin of 137 square miles is mountainous, reaching an altitude of 3,000 feet.

Report authorized by: Flood Control Act of 1938.

Existing project: None. Some clearing and snagging has been performed under Flood Control Act of 1937.

Plan of recommended improvement: Levees and flood walls along San Lorenzo River, with minor channel improvement, and channel improvements and rectification for Branciforte Creek.

Estimated cost:

	Federal	Non-Federal	Total
Report (February 1953)	$2,565,000	$670,000	$3,235,000
Current (October 1953)	2,665,000	696,000	3,361,000

Local cooperation: Furnish all lands, easements, and rights-of-way; make necessary bridge and utility revisions and replacements or in lieu thereof contribute in cash the cost of that work; hold and save the United States free of damage; maintain and operate completed work; prevent encroachment in project channels which would interfere with flood control.

Project economics:

	Report	Current
Annual charges:		
Federal: Interest and amortization	$90,400	$94,000
Non-Federal	36,400	37,900
Total	126,800	131,900
Annual benefits	143,000	161,000
Benefit-cost ratio	1.13	1.22

Comments of the Bureau of the Budget: No objection to submission of report to Congress, but authorization of project would be in accord with the program of the President only if a cash contribution, presently estimated at $227,500, is made by local interests in addition to the other requirements of local cooperation.

Senator BUSH. May I see it?

I haven't seen it.

Is there any further comment in connection with the San Lorenzo River project?

If not, we will proceed to the Santa Maria River, in California.

Colonel Starbird.

Colonel STARBIRD. The Santa Maria River Basin is located about halfway between San Francisco and Los Angeles. It is a 1,900-square-mile basin.

A provision in the public laws of 1937 directed an investigation of this basin. A joint investigation was conducted by the corps with the Department of Interior.

Joint recommendations resulted. According to those recommendations, the Department of Interior is to build a reservoir. I will describe it in more detail in a moment. The Corps of Engineers is to do certain leveee and channel improvement work, which I shall also describe.

In considering the basin, which flows again from the mountains down to the ocean, we should break it into two parts:

First, the lower quarter of the area, extending generally from the confluence of the two major tributaries to the ocean proper.

Second, the area from that confluence on to the crest of the mountains.

In this case the area of the major tributaries and their subtributaries is again quite mountainous. The valleys are narrow. In fact, directly above the confluence the rivers flow through narrow canyons.

There is some limited agriculture in these upper valleys, particularly on the upper reach of the Cuyama River, but generally development of the upper three-quarters of the basin is light.

The lower part, on the other hand, is highly developed. Some 25,000 persons live in the area. Ten thousand live in Santa Maria, which, as you can note, is partially within the flood plain.

The problem in this area is twofold:

First, a shortage of water to support the irrigation that is now carried out;

Second, too much water during certain seasons and, consequently, excessive and damaging floods.

Insofar as the shortage of water for irrigation is concerned, there are about 40,000 acres of land now irrigated in the lower reach.

The Department of Interior has estimated that if there are no improvements put in, the water that is available in the ground-water

table can support for irrigation, long-range, only 27,000 acres. The area, therefore, is being overpumped at the present time, and there is a probability that, without development, it will be necessary to abandon certain acres now in irrigation.

Insofar as flooding is concerned, there is some $77 million worth of development in the flood plain. There are 33,000 acres in the flood plain. As mentioned earlier, that development and those acres are south of the confluence of the two primary tributaries.

There are floods in the lower basin on the average of about once every 5 years. The annual flood damage is in the neighborhood of $630,000.

The Department of Interior and Corps of Engineers investigated three possible plans. The first plan was one involving the construction of a rather large reservoir at the confluence of the two major tributaries. That plan was rejected because of foundation difficulties and because certain useful land would be flooded out by the reservoir.

The second plan investigated was one for the construction of a large floodway, all the way from the confluence through the useful land to the sea. That plan was rejected because it was not economically justified.

The plan finally agreed upon and found to be the best for the valley was one which involved the construction of a reservoir at Vaquero, recommended for construction by the Department of Interior, and the construction of supplemental channel improvements and levees along the floodway to carry the waters past Santa Maria and past the developed agricultural areas to the sea.

The estimated cost of the Department of Interior's reservoir is $17 million in round numbers. Of that amount, 3 million is allocated to flood control, the remainder to irrigation, and will be repaid over a period of years.

The report of the Department of Interior has passed the House, has been reported out in the Senate, and has not yet been acted upon finally in the Senate. It would authorize the Department of Interior to go ahead with that reservoir.

I will discuss that reservoir no further.

As far as the supplemental improvement is concerned, there would be about 50 miles of levee. They would be relatively low levees. The channel would be enlarged in connection with the building of the levees and the levees would be reinforced in places subject to erosion.

The estimated cost to the Federal Government of the construction of that levee, in round numbers, again, would be $10 million.

The local interests would be expected to pay for lands, rights-of-way and public relocations, except railroad relocations, and the cost of such features to them is estimated at $1,200,000. They would take over maintenance and operation of the levees at about $40,000 a year.

This plan has been reviewed by several agencies, none of whom offered objection to the plan.

The Bureau of the Budget offered no objection to its transmission to the Congress.

The overall benefit-to-cost ratio of the project, according to our present estimate, is 1.95 to 1.

Senator BUSH. How does this repayment of this take place?

Where do they get the funds?

Senator KUCHEL. I might—go ahead, Colonel.

Colonel STARBIRD. It normally is raised through the formation of a local-interest organization.

Senator BUSH. Drainage district?

Colonel STARBIRD. Drainage district—irrigation district, which in turn repays on a long-range contract for the cost involved.

Senator BUSH. How do they get the money?

Senator KUCHEL. Ad valorem taxes.

I might add, Mr. Chairman, for the record, that such an agency has been created in the laws of California, and in the hearing on the Vaquero Reservoir in the Senate Interior Committee there was no objection.

Senator BUSH. Is this typical of other projects in the State?

I mean, is this following a pattern of irrigation?

Senator KUCHEL. No. There are some unique features involved in the Vaquero Reservoir. As I understand the technical aspects of it, the water would percolate.

Colonel STARBIRD. That is right, sir. Outflow would be generally limited so there would be none wasted down the channel. The objective would be to build up the subterranean water table, which is pumped for irrigation.

Senator BUSH. I was thinking a little bit of this payment, Senator.

Senator KUCHEL. Yes.

Senator BUSH. There has been a lot of irrigation?

Senator KUCHEL. Oh, yes.

Senator BUSH. Has there been a good record of repayment in connection with those projects?

Senator KUCHEL. Oh, yes. I don't think there has been any—well, I will put it this way: I know of no instance——

Senator BUSH. Where it has fallen down?

Senator KUCHEL. That is right.

Senator STENNIS. Excuse me. I will be back later.

Senator BUSH. All right, sir.

Is there any further comment?

Any questions?

Senator Holland.

Senator HOLLAND. I understand the irrigation side of it, but why the channel and levee improvements below the interior structure?

Colonel STARBIRD. Sir, the interior structure will control the design flood to the extent of reducing it from 230,000 cubic feet per second near Santa Maria 150,000 cubic feet per second. However, even that 150,000 cubic feet per second will cause serious overflow. Therefore, the levees and the channel improvement are necessary to prevent the additional damage that could occur.

Senator BUSH. Are there any further questions?

If not, we will insert this memorandum in the record at this point, if there is no objection.

(The memorandum referred to is as follows:)

SANTA MARIA RIVER AND TRIBUTARIES, CALIFORNIA

(H. Doc. 400, 83d Cong)

Location: The Santa Maria River is formed by the confluence of the Cuyama and Sisquoc Rivers at Fugler's Point in Santa Barbara County, Calif. It flows generally westward 25 miles to the Pacific Ocean draining an area of 1,845 square miles.

Report authorized by: An act approved May 14, 1937, and Flood Control Act, August 28, 1937.

Existing project: None.

Plan of recommended improvement: A multiple-purpose reservoir at the Vaquero site, mile 8 on the Cuyama River to be constructed by the Bureau of Reclamation, with levee and channel improvements along Santa Maria River and Bradley Canyon, to be constructed by the Corps of Engineers.

Estimated cost (October 1952 [1]*):*

	Federal	Non-Federal	Total
Reservoir	[2] $16,982,000		[2] $16,982,000
Levee and channel improvement	10,182,000	$1,216,000	11,398,000
Total	27,164,000	1,216,000	28,380,000

[1] Report and current costs are same.
[2] Includes $3,013,000 allocated to flood control.

Local cooperation: Reservoir—Agree to adjust water-rights claims resulting from operation of the reservoir. Levee and channel work—Provide lands, easements, and rights-of-way; hold and save United States free of damages; pay all necessary railroad, highway, and utility relocations except railroad bridges and approaches; maintain and operate completed project; agree to adjust all water-rights claims resulting from operation of channel improvements.

Project economics:

	Report (October 1952)	Current (October 1953)
Annual charges:		
Federal:		
Interest and amortization	$909,400	$909,400
Maintenance	25,400	35,200
Non-Federal	89,300	94,600
Total	1,024,100	1,039,200
Annual benefits:		
Flood control	600,000	720,000
Conservation	1,310,700	1,310,700
Total	1,910,700	2,030,700
Benefit-cost ratio	1.87	1.95

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Senator BUSH. We will proceed now to the Richmond Harbor, Calif., project.

General ITSCHNER. Mr. Chairman, I would like to call upon Colonel Allen to testify on this project.

Senator BUSH. Colonel Allen.

Colonel ALLEN. Mr. Chairman, there is an existing project in the port of Richmond, Calif., at the present time which provides, in general, for depths of 32 feet as access to the Richmond wharves and up in the Santa Fe Channel to the industrial and port area of Richmond.

Senator BUSH. Where is that on the small scale?

Colonel ALLEN. Richmond, sir, is one of the ports of San Francisco Bay. It is one of the interior ports in the Bay of San Francisco.

The existing project provides, in general, for 32-foot depths, with channel dimensions varying from 400 to 200 feet in the Santa Fe Channel.

With that existing project and those dimensions, in 1952 the port of Richmond handled nearly 14 million tons of commerce, primarily petroleum into the refinery at Richmond.

As the tankers which carry this material into the port of Richmond have increased their dimensions, increased their carrying capacity, it has become increasingly apparent that some modification of this project is desirable in order that these tankers can load to full capacity and make a more efficient use of their cargo space.

Local interests have requested that a modification of this project be recommended with this in mind.

The district engineer has recommended to the board of engineers and the Chief of Engineers is recommending to the Congress that the project for the port of Richmond be modified to provide, in general, for depths of 35 feet to the existing piers and wharves and terminal facilities in the port of Richmond.

That deepening is also to be accompanied by a widening in this entrance channel from 400 feet to 600 feet, easing of the bends in the Point Potrero area in order to permit the larger ships to more safely negotiate this turn, and continuation of a 35-foot project up to the head of navigation at the Santa Fe Channel.

It is felt that such an improvement would permit a more efficient use of the tankers which are now in use in this port and permit them to more beneficially use their time rather than waiting for the tides to come in with their cargo.

This report has been referred to all agencies. None of them had any serious comments.

The Bureau of the Budget had one comment to make. That was with respect to the maintenance of the Navy pier at Molate Point. They felt if this project is authorized that when the question of maintenance is raised consideration should be given to a contribution by the military for maintenance of the Molate Point channel. That maintenance is now estimated at $15,000 a year.

Those were the only objections raised by the budget. They had no objection to transmitting the report to the Congress.

The total estimated Federal cost of the project is $2,086,000, with a benefit-to-cost ratio of 1.8.

Senator HOLLAND. What is the tonnage handled at that particular point?

Colonel ALLEN. The tonnage in 1952, sir, precisely was 13,436,000 tons.

Senator HOLLAND. That is Richmond Harbor?

Colonel ALLEN. Yes, sir.

In this facility the average through the period 1946 to 1950 was slightly less than 10 million tons. So, the tonnage is on the increase.

Senator BUSH. Where is that tonnage handled?

Will you point it out on the map?

Colonel ALLEN. The tonnage is handled at this point, and in the Santa Fe Channel, in the port facilities up in here.

Senator BUSH. They have port facilities all the way up in that channel?

Colonel ALLEN. Yes, sir.

Senator HOLLAND. Where is the refinery?

Colonel ALLEN. The refinery is served from this point.

Senator BUSH. Where is the refinery?

Colonel ALLEN. I don't know specifically where in the area it is.

General ITSCHNER. It is close to the basin.

Colonel ALLEN. Close to the basin, here.

Senator BUSH. I am sorry to seem a little thick about this, but this hairpin turning that comes and turns north there—what is up that channel?

Colonel ALLEN. You mean up in here?

Senator BUSH. Nearest to you, sir.

Colonel ALLEN. Up in here?

Senator BUSH. No; come on down.

Colonel ALLEN. Here?

Senator BUSH. Yes.

Colonel ALLEN. This is the channel that serves the general cargo area. That is where general merchandise, general cargo is served, from wharves in this area and piers and docks up in this area.

Senator BUSH. What is up in there?

That is what I am asking.

Colonel ALLEN. General cargo terminal, sir.

Senator BUSH. Miscellaneous?

Colonel ALLEN. Miscellaneous cargo and general cargo terminals and docks.

Senator BUSH. Thank you.

Are there any other questions?

If not, without objection, we will insert this memorandum in the record at this point.

(The memorandum referred to is as follows;)

RICHMOND HARBOR, CALIF.

(H. Doc. No. 395, 83d Cong.)

Location: Richmond Harbor is on east side of San Francisco Bay. It extends principally from Point San Pablo southeast about 4.5 miles to Point Richmond.

Report authorized by: House Public Works Committee Resolution, April 13, 1948.

Existing project: A channel 20 feet deep and 2,000 feet long on north side of Point San Pablo; approach areas 4,000 and 2,500 feet long and 32 feet deep between deep water in the bay and berthing areas provided by local interests; an inner harbor channel of various widths and 30 feet deep from deep water in the outer harbor to shore end of Santa Fe Channel together with turning basins; and a training wall on bay side of the channel between Points Richmond and Potrero. Project completed except for a strip along west side of channel just north of Point Potrero.

Plan of recommended improvement: A channel 35 feet deep and 600 feet wide adjacent to Southampton Shoal from deep water to the outer harbor, enlarging the approach area in vicinity of Richmond Long Wharf for 3,670 feet and deepening enlarged area to 35 feet, deepening to 35 feet and widening to 600 feet the inner harbor entrance channel from deep water to the turning basin at Point Richmond, deepening to 35 feet the turning basin at Point Richmond and thence the inner harbor project to a point in Sante Fe Channel 2,000 feet above its entrance, including dredging on the east side of the channel in vicinity of Point Petrero, and maintenance of a suitable approach area at the naval fuel annex wharf to a depth of 35 feet.

Estimated cost:

	Federal	Non-Federal	Total
OCE report (January 1952)	$1,866,000		$1,866,000
Current (October 1953)	2,086,000		2,086,000

Local cooperation: Furnish necessary easements, hold and save United States free from damages, construct and maintain suitable wharves and shiploading and cargo-storage facilities.

Project economics:

	OCE report	Current
Annual charges:		
Interest and amortization	$68,300	$76,500
Maintenance (in addition to existing project)	41,400	41,400
Total	109,700	117,900
Annual benefits	191,800	214,000
Benefit-cost ratio	1.7	1.8

Comments of the Bureau of the Budget: No objection to submission of report to Congress. Stated that maintenance of the approved area at the naval fuel annex wharf as a civil works project would not be in accord with President's budget inasmuch as the approach area channel is a military facility and not for general navigation.

Senator BUSH. Thank you very much, Colonel.

Senator KUCHEL. Mr. Chairman.

Senator BUSH. Senator Kuchel.

Senator KUCHEL. I don't want to take the time of the committee, but I do have a prepared statement which I ask unanimous consent to be incorporated in the record.

Senator BUSH. Without objection, that will be incorporated in the record.

(The statement referred to is as follows:)

RICHMOND HARBOR, CALIF.

The item I am about to discuss involves the improvement of the harbor at Richmond, Calif., and is the subject of a report from the Chief of Engineers, Department of the Army, dated November 5, 1953, which, together with the comments of the various interested governmental agencies, appears in House Document No. 395, 83d Congress, 2d session.

The city of Richmond is an industrial area depending greatly upon its harbor facilities. The refining and distribution of petroleum is the largest industry in the area. The Standard Oil Co. maintains a large oil refinery and storage and distribution centers, and petroleum products are shipped from its plant to various points along the Pacific coast and the Far East. Richfield Oil Corp. operates an oil-distribution terminal in the inner harbor and I am informed that theTexas Co. has recently completed a large distribution terminal on the Santa Fe Channel. The Ford Motor Co. has a large assembly plant in Richmond and other important manufactures are fishmeal and oil, canned fruits and vegetables, chemicals, machinery, steel containers, and lumber products. During World War II, four large shipyards were also operated at Richmond by the Maritime Commission.

In 1950, the last year referred to in the Army engineers' report, the commerce in petroleum and its products totaled about 10,500,000 tons and the general-cargo commerce was in excess of 360,000 tons. The presently authorized project provides for channels varying from 30 to 32 feet in depth with a minimum width of 400 feet except that the minimum width in Santa Fe Channel is 200 feet. The present authorized depth and width of these channels cannot safely accommodate the larger size vessels constructed during and since the war.

The last improvement to the areas covered by the project report were made in 1941. Since that time the size and draft of vessels, both tanker and dry cargo, have very materially increased. For example, during the war, the Maritime Commission built the T–2 tankers which became the predominant type vessel used in carrying petroleum. These vessels had a carrying capacity of approximately 16,500 tons and had a draft of slightly in excess of 30 feet. Since the war, vessels of 38,000 tons with drafts in excess of 33 feet regularly call at the Richmond long wharf. It appears to be an accepted fact that vessels should have at least 3 feet of water below the keel. From the foregoing, it will be observed that the present authorized depth of channels become insufficient with the advent of the T–2 type tanker and the C-type dry-cargo vessels which were built during the war. Since that time, as mentioned above, even larger vessels, both tanker and dry cargo, have been constructed and the need for deeper and wider channels became increasingly greater.

This project was the subject of a hearing before the subcommittee of the Public works Committee of the House of Representatives on June 28, 1954, which hearing was held subsequent to all the other hearings on matters contained in the omnibus bill and immediately prior to the executive session of the full committee to consider the omnibus bill. The delay in holding the hearing was occasioned through no fault of the city of Richmond but was due solely to the time required to obtain the reports of the various governmental agencies and transmit them to the Speaker of the House with the letter of the Secretary of the Army dated May 12, 1954. The city of Richmond and the local industries have enthusiastically supported this project since the initial hearing in Richmond, on July 28, 1948.

I understand that the full committee did not reject this project but in view of their desire to promptly submit the bill to the House for action omitted the project from the omnibus bill without prejudice to its reconsideration in the event the Senate included the project. I might state here that the only portion of the project on which the Bureau of the Budget made any adverse comment concerned the work proposed to be done at the naval fuel annex wharf at Molate Point. The Bureau's comment on this phase of the project was that—

"* * * Initial dredging of the approach channel and its subsequent maintenance, although accomplished by Corps of Engineers equipment, was authorized and financed as a Navy project. The channel is presented solely as a naval facility and not as a waterway for general navigation. Work of this nature is customarily authorized and financed as part of the military public works program. There appears to be no justification in this case for making an exception to the established police of accomplishing work of this character as a military project by authorizing the maintenance of the approach channel as a civil works project."

While it is understandable that the Army engineers would include this phase in the overall project, the position of the Bureau of the Budget appears to be sound.

The hearing before the House subcommittee was unanticipated and in the few days available it was difficult to secure the attendance of all the interested parties from California. However, the city of Richmond realizing the necessity for favorable action on this project sent its city attorney back to testify in favor of it. The Pacific American Tankship Association, the Pacific American Steamship Association, and the American Merchant Marine Institute, Inc., all appeared at the hearing and testified in favor of the project. The various Congressmen representing Richmond and the surrounding territories either appeared or submitted statements in favor of the project. Since the hearing, the mayor of Richmond together with the city manager personally visited me in Washington to stress the importance of this project to the people of the city of Richmond.

I cannot urge too strongly the adoption of this long-deferred but increasingly important improvement to the harbor facilities of the city of Richmond as an aid to the people of Richmond and to the continued industrial growth of that area which is of vital concern to this country.

Senator BUSH. Have we a statement from Senator Knowland on that, too? I have a note here to that effect.

Senator KUCHEL. The letter which was introduced in the record earlier, Mr. Chairman, I am informed, is my colleague's recommendations on all four of these projects.

Senator BUSH. Thank you, sir.

The next project is the Carabelle Harbor project in Florida. Who will explain that?

General ITSCHNER. Colonel Allen will explain this project.

Senator BUSH. Colonel Allen.

Colonel ALLEN. This project of Carabelle Harbor, Mr. Chairman, is located in west Florida. There is also, as in the case of Richmond Harbor, an existing project in Carabelle Harbor which provides for a project 27 feet deep, with varying widths up to the now-existing head of navigation.

In 1951, an emergency dredging project was accomplished in order to adequately serve the needs of a fishing fleet in Carabelle Harbor. The costs of that work was $3,800. It deepened the project to 8 feet by 60 feet wide in order that fishing vessels would not have to unload their cargo, transport it overland or wait for the tides to get into the fishing docks.

This project would merely authorize that project so it would become eligible for maintenance in future years.

There is no new work to be done.

The project has been dredged under emergency authorizations to its 8- by 60-foot proportions, and authorization for this project would place it in line for maintenance estimated to be at about $1,000 a year.

The benefit-cost ratio of the project is 1.72.

There is no objection on the part of any agency to transmitting this report to Congress.

Senator BUSH. Senator Holland.

Senator HOLLAND. Mr. Chairman, I think that is clear. The corps does not suggest any further important work there at all, but does propose to keep up the work that was done on the emergency basis in 1951.

This is a fishing village of about a thousand or 1,200 people, with some 6 or 8 commercial fishing docks where the fishing boats discharge and refit and refuel, and so forth.

The whole population relates to the fishing operation, except for the service population and except, too, for a sizable business in pulp logs that move from there by barges on the intercoastal waterway into Port St. Joe and Panama City and Pensacola.

I think the project is completely justified. As a matter of fact, I would like to see greater depth there; but apparently the engineers have not found at the present time there is sufficient justification for additional new construction.

Is that correct?

Colonel ALLEN. It was felt the project mentioned, 8 by 60, was adequate to serve the needs of the existing commerce.

Senator HOLLAND. Of course, it makes sense to keep up what is there and what is a part of an important commercial business; and that, as I understand, is what their report recommends.

Colonel ALLEN. Yes, sir.

Senator BUSH. Without objection, we will insert this memorandum in the record at the conclusion of Senator Holland's remarks.

(The memorandum referred to is as follows:)

CARRABELLE HARBOR, FLA.

(H. Doc. 451, 83d Cong.)

Location: Carrabelle Harbor, Fla., is on the east bank of Carrabelle River about 1.5 miles from its mouth. The river, a small tidal stream about 400 to 700 feet wide and up to 28 feet deep, enters St. George Sound on the gulf coast 22 miles east of the Apalachicola River. Upstream from the harbor, broad mud flats extend from the harbor bank to midstream. The mean range of tide is 1.9 feet.

Report authorized by: River and Harbor Act, May 17, 1950.

Existing project: The existing Federal project provides for an entrance channel 27 feet deep and 200 feet wide from the Gulf of Mexico through East Pass to a point west of Dog Island, thence 25 feet deep and 150 feet wide through St. George Sound and Carrabelle River to a turning basin 500 feet square and 25 feet deep at the town of Carrabelle, a total distance of about 8 miles. The present controlling depth is about 16 feet.

Plan of recommended improvement: Modification of the existing project to provide for maintenance of a channel dredged with emergency funds in 1951 at a cost of $3,800. The channel, 8 feet deep and 60 feet wide, extends along the waterfront of Carrabelle, Fla., 1,200 feet from the head of the existing project turning basin.

Estimated cost: No additional first cost because dredging has been accomplished.

Local cooperation: Local interests will provide suitable spoil-disposal areas and hold and save the United States free from damage.

Project economics:

	Project document	Current
Annual charges	$1,630	$1,630
Annual benefits	$2,810	$2,810
Benefit-cost ratio	1.72	1.72

Remarks: The project is economically justified on benefits from reduced delays and damages to vessels, and from elimination of the rehandling of seafood.

Senator BUSH. Any further comments on the Carabelle Harbor matter?

If not, we will proceed to the Bear Creek, Mo., project.

General ITSCHNER. Colonel Starbird will testify on this project.

Senator BUSH. Colonel Starbird.

Colonel STARBIRD. Sir, the project of concern at Bear Creek is one for the protection of the city of Hannibal, a city of 20,400 persons, located about 100 miles above the city of St. Louis and on the west bank of the Mississippi River.

A Senate Public Works Committee resolution of 1947 called for this investigation.

The city of Hannibal is shown in greater detail on the lower map.

You will note that the Mississippi River fronts on a part of the city, a relatively narrow part.

There is some industry located in the flood plain of the Mississippi. There is some damage there.

The estimated annual damage from Mississippi River floods, however is relatively light being about $64,000 a year, as compared with $218,800 from Bear Creek floods.

Bear Creek is a 21-mile long stream which flows through the southern section of the city.

In the flood plain of Bear Creek there are 500 residences, 200 commercial establishments, 7 manufacturing plants, yards and shops of 2 railroads and municipal power, water and sewage treatment plants.

The average annual damage from floods from Bear Creek is of the order of $214,000, and floods occur on the average of about once every 3 years.

The Chief of Engineers investigated the possibility of levees and channel improvements, but did not find an economic soltuion using either of the two means.

He investigated a reservoir, to be about 4 miles above the upper edge of the city, of 7,500-acre-foot capacity and purely for flood control. He found that an economic solution could be found through such a means.

The reservoir would eliminate 88 percent of the damage to the city from Bear Creek.

The Chief of Engineers recommended construction of that dam and reservoir.

The estimated cost that you have on your sheet is the estimated cost at the time of the report.

The estimated cost at the present time for the construction of the reservoir and relocation of the railroads involved is $3,326,000.

The benefit-to-cost ratio of the project at the present time is 1.53 to 1.

In the normal case of reservoirs, the acquisition of lands and the relocation of highways and the like are accomplished by the Federal Government. In this particular case, however, the Chief of Engineers felt that the project is an alternative for local protection works, and it would be appropriate, therefore, that the local interests should pay for the lands, relocations, furnish any necessary rights-of-way and also maintain the project upon completion.

The current cost to the local interests is estimated at $189,600; the cost of maintenance and operation, $9,000 a year.

Operation would be, according to procedures, prescribed, of course, by the Chief of Engineers.

This plan was reviewed by the State of Missouri, the Federal Power Commission, the Department of Interior, Department of Agriculture, none of whom had objections to the plan.

The plan was reviewed by the Bureau of the Budget who had no objection.

The Secretary of the Amy recommends authorization of these works.

Senator BUSH. Off the record.

(Off the record.)

Senator BUSH. On the record.

Any questions?

If not, this memorandum will be inserted in the record at this point.

(The memorandum referred to is as follows:)

BEAR CREEK, MO.: LOCAL PROTECTION AT HANNIBAL, MO.

(H. Doc. No. 435, 83d Cong.)

Location: Hannibal is on the Mississippi River in northeastern Missouri. Bear Creek rises in Marion County, Mo., and flows easterly to its junction with the Mississippi River. The lower 3 miles are within the city of Hannibal.

Report authorized by: Senate Public Works Committee resolution adopted June 24, 1947, and House Flood Control Committee resolution adopted September 18, 1944.

Existing project: None in Bear Creek Basin. Lock and dam No. 22 of the 9-foot Mississippi River navigation project is located 7 miles upstream of Hannibal.

Plan of recommended improvement: Construction of a dam and reservoir and appurtenant works on Bear Creek for reduction of flood damages in Hannibal, Mo.

Estimated cost:

	Federal	Non-Federal	Total
Project document (December 1951)	$2,822,200	$153,500	$2,975,700
Current (October 1953)	3,326,000	189,600	3,515,600

Local cooperation: Provide all lands, easements, and rights-of-way; hold and save the United States free from damages; pay all necessary relocations except railroad relocation; maintain and operate project; prevent encroachment which would reduce flood carrying capacity of Bear Creek in Hannibal.

Project economics:

	Project document	Current
Annual charges	$129,600	$135,100
Annual benefits	$190,700	$206,400
Benefit-cost ratio	1.47	1.53

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Remarks: Flash floods occur frequently on Bear Creek and cause extensive damages to industrial and residential property in Hannibal. Since the benefits are entirely local, participation by local interests in the cost of the project has been recommended in the form of furnishing all lands and certain relocations.

Senator BUSH. Congressman Cannon of Missouri is present and desires to make a statement. You may proceed, sir.

STATEMENT OF HON. CLARENCE CANNON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSOURI

Mr. CANNON. Mr. Chairman, when the public works bill, H. R. 9859, was reported out by the House committee no report had been received on the construction of the proposed dam on Bear Creek just discussed by the Corps of Engineers.

Bear Creek is a stream with an extensive watershed and is subject to violent torrents following heavy rainfall and rapidly melting snows which overflow portions of Hannibal, the principal city in northeast Missouri, and occasion excessive flood damages. As has been indicated here this morning the report of the Corps of Engineers is favorable and recommendation is made for construction of the dam providing reservoirs which will impound surplus floodwaters and protect the city of Hannibal and adjacent agricultural lands in Marion and Ralls Counties from inundation.

With the permission of the committee I wish to quote from the following telegram just received from Hon. John R. Schroeder, mayor of the city of Hannibal, and Mr. W. Crawford Smith, president of the Hannibal Chamber of Commerce.

HANNIBAL, MO., *July 22, 1954.*

HON. CLARENCE CANNON,
Washington, D. C.:

Senate Committee on Public Works is considering omnibus bill including rivers and harbors, beach erosion, and flood-control projects. Items under consideration do not include construction of dam and reservoirs and appurtenant works on Bear Creek for reduction of flood damages at Hannibal. Flash floods in Bear Creek have caused great damage to residential and industrial property. Flood of June 1, 1947, resulted in damages totaling $657,100, 900 persons had to be

evacuated. Industries affected include shoes, rubber heels and soles, precision tools, coin wrappers, cement products, and finished lumber which constitutes major industries of the city. Two railroad lines also affected. Rural areas devoted to dairying and raising feed for livestock likewise suffered. Recent floods include years of 1937, 1944, 1945, 1947, and 1949. United States engineers have studied this situation and made recommendations for correction through division office, Board of Engineers for Rivers and Harbors, chief engineer, State of Missouri, and other Federal agencies. It is imperative that the Bear Creek project be authorized as recommended by United States engineers without delay to stop this reoccurring loss to citizens of this community.

JOHN R. SCHRODER,
Mayor, City of Hannibal.
W. CRAWFORD SMITH,
President, Hannibal Chamber of Commerce.

Mr. Chairman, the need is imperative and the report of the Engineers is that the project is feasible in every way with a favorable ratio and I trust the situation is such as to warrant the committee's including this project in Senate amendments proposed to the House bill.

The CHAIRMAN. Senator Hennings, we will be pleased to receive any statement you may wish to make on the Bear Creek Reservoir project in your State.

STATEMENT OF HON. THOMAS C. HENNINGS, A UNITED STATES SENATOR FROM THE STATE OF MISSOURI

Senator HENNINGS. Mr. Chairman, I would like to make a very brief statement in behalf of the proposed Bear Creek Reservoir project to provide flood protection for Hannibal, Mo.

Hannibal has suffered from severe floods in 1937, 1944, 1945, 1947, and 1949. The most destructive flood occurred in June of 1947 when damages were estimated at $657,000 and 900 people had to be evacuated.

The Bear Creek project was favorably recommended by the Board of Engineers for Rivers and Harbors on October 1, 1952. The Chief of Army Engineers has concurred in this recommendation, and the project was approved by the State division of resources and development on January 29, 1953, and by the Bureau of the Budget on May 20, 1954.

The project provides for the construction of a dam and reservoir and appurtenant works on Bear Creek at an estimated Federal cost of $2,822,200 and the cost to local interests for lands and relocation, exclusive of railroads, is $153,500.

Hannibal is subject to flooding both from Bear Creek and from backwater from the Mississippi River. The district engineer has estimated that the average flood damage is $283,000, of which by far the most substantial portion, $219,000, is from Bear Creek and $64,000 from the Mississippi River.

The proposed reservoir is an alternative to the construction of floodwalls. It would provide protection to the flood plain at Hannibal which contains about 500 dwellings, 200 commercial establishments, municipal power, water and sewage treatment plants, the yards of 2 main railroads and 7 industrial plants manufacturing shoes and other footwear, drill tools, coin-wrapping machines, cement blocks, and finished lumber.

It is my understanding that local interests have agreed to provide without cost to the United States all lands and rights-of-way, includ-

ing borrow areas which provide earth fill for the dams. They have also agreed to hold the Federal Government free from damages due to works and construction. They have indicated that they are able and willing to pay for all necessary relocations except railroads within and immediately downstream from the reservoir. In addition, local interests have agreed to maintain and operate all works after their completion.

Mr. Chairman, I earnestly urge that the Bear Creek project be authorized at this time to provide the protection so urgently needed at Hannibal.

Senator BUSH. We will proceed to the Charleston Harbor project in South Carolina.

General ITSCHNER. Colonel Allen will discuss that.

Senator BUSH. Colonel Allen.

Colonel ALLEN. The existing navigation project in Charleston Harbor provides essentially a 35-foot channel from the sea through jetties to the south side of Drum Island, then up to the head of navigation, a distance of about 16 miles.

In addition to the 35-foot channel in Town Creek, a 30-foot channel is provided to the east of Drum Island, which joins the main channel above Drum Island.

The purpose of providing the alternate 30-foot channel originally was to relieve congestion in what was the Town Creek Channel and provide a ready access for ships to the main port area in the Charleston area.

Most of the petroleum products which come into Charleston are discharged up in the port terminal area.

Most of the prtroleum ships, the tankers, are ships that require the 35-foot channel.

The use of the 35-foot Town Creek Channel by this large amount of tonnage introduces serious congestion and hazardous conditions when ships are entering and discharging cargo. As a matter of fact, the head of terminal here is only 65 feet from the channel, and when ships proceed up this channel they cause parting of moorings of ships which are moored and tied to these docks discharging their cargo.

Local interests have requested that this project be modified to provide a deeper channel to the east and north of Drum Island to permit tankers and ships which must go to the Charleston area to discharge their cargo to avoid passage of the Town Creek Channel.

The Chief of Engineers has recommended that the Charleston project be modified to deepen the existing 30-foot channel in Cooper River east and north of Drum Island to 35 feet in order to provide a safer navigating condition for ships which have to discharge their cargo in the Charleston port area.

The estimated cost of this modification is $200,000.

The report has been submitted to the various agencies. There have been no adverse comments with respect to the report.

Senator BUSH. Any questions from the committee?

At this point in the record I would like to insert a letter from Senator Maybank, who has spoken to me and highly recommends we proceed with this project, or that we approve this project.

(The letter referred to is as follows:)

UNITED STATES SENATE,
COMMITTEE ON APPROPRIATIONS,
July 21, 1954.

Hon. PRESCOTT BUSH,
Chairman, Public Works Subcommittee Flood Control, Rivers and Harbors,
Washington, D. C.

DEAR PRES: You have before you the omnibus rivers and harbors bill containing an item for the deepening of the Charleston, S. C. Harbor.

It would be appreciated if you would look into this matter and have it reported favorably. It has been recommended by all of the Government agencies and it is essential that the channel in the Charleston Harbor be deepened because of the many Government installations, particularly the navy yard at the other end.

If there should be any opposition to it, I would appreciate your getting in touch with my office as I am tied up daily with the Appropriations Committee and what spare chance I have to get off, it is essential that I be at the Banking Committee as you can well understand.

With kind regards, I am

Sincerely yours,

BURNET R. MAYBANK.

Senator BUSH. We have here from South Carolina, Mr. Crump who represents the South Carolina State Ports Authority.

Will Mr. Crump come up here, please?

STATEMENT OF T. CARLISLE CRUMP, REPRESENTING THE SOUTH CAROLINA STATE PORTS AUTHORITY

Mr. CRUMP. Mr. Chairman, I will just take one minute to say that Colonel Allen has adequately described, more than adequately described, this project to you.

I would just call attention to one other fact which was not mentioned to you: that the navy yard is up in there also and the project is badly needed.

We feel that the engineers have amply covered it.

It has been approved by all of the related agencies at interest, and we merely endorse the report of the Engineers.

Thank you very much.

Senator BUSH. Thank you very much, Mr. Crump.

Are there any questions?

If not, this memorandum will be inserted in the record at this point.

(The memorandum referred to is as follows:)

CHARLESTON HARBOR, CHARLESTON, S. C.

(S. Doc. 136, 83d Cong.)

Location: Charleston Harbor includes the lower portion of the tidal estuaries of the Cooper and Ashley Rivers, which unite and flow into the Atlantic about midway of the coast of South Carolina. Mean tide range is 5.2 feet.

Report authorized by: House Public Works Committee resolution, May 12, 1950.

Existing project: Federal navigation project provides for channel 35 feet by 1,000 feet from sea to the inner end of jetties, then 600 feet wide to Town Creek, then 500 feet wide through Town Creek, then 600 feet wide to navy yard, then 400 feet wide to Goose Creek with turning basin, 700 feet at port terminals, together with a 30 feet by 600 feet channel in Cooper River around the east and north side of Drum Island; an anchorage area, 30 feet deep between Castle Pinckney and Fort Moultrie; and shallow draft improvement in Shem Creek.

Recommended plan of improvement: Modification of existing project to provide for a channel 35 feet deep in Cooper River east and north of Drum Island.

Estimated cost:

Survey report:	
Federal	$200,000
Non-Federal	
Total	200,000

Local cooperation: Local interests will provide all lands, easements and rights-of-way for construction and maintenance and hold and save the United States free from damage.

Project economies:

Annual charges:	
Interest and amortization	$7,100
Increased maintenance	114,000
Total	121,100

Annual benefits: Unevaluated. Includes elimination of hazard, greater maneuverability, relief of traffic congestion, savings in time for vessels using Town Creek wharves, and more practical from a Navy standpoint.

Benefit-cost ratio: Not evaluated.

Remarks: The new east passage around Drum Island will reduce the collision hazard, particularly for large tankers.

Senator BUSH. We will proceed to the Port Washington Harbor in Wisconsin.

Colonel ALLEN. Port Washington is located on the west shore of Lake Michigan, north of Milwaukee.

The existing project at Port Washington provides essentially for a jetty entrance, with a 21-foot deep basin, main basin, with two 18-foot deep interior basins.

The cargo into Port Washington is essentially coal, which serves a public utility with its facility shown here.

As the ships which use this entrance increased in size, since this project was originally authorized, it has become increasingly more hazardous for ships to negotiate the narrow entrance shown between this point and this point.

In any type of waves or wind action, it is necessary for the ships to come in at a fairly high speed in order to maintain steerage way in order to avoid collision with either of the breakwaters, which causes them immediately, once they get inside, to reverse their engines in an effort to get over to the coal dock.

The same condition obtains when leaving the harbor. They must in any type of weather get up as much speed as possible in order to safely negotiate this entrance.

Local interests have requested that the project at Port Washington be reviewed to determine what can be done in order to make a safer condition for the ships using this harbor.

The Chief of Engineers is recommending that the project be modified as follows:

It would remove the outer limb of the south breakwater here.

It would raise the north breakwater at the inner end and also extend it outward.

In addition, the project also recommended would increase to some extent, to a depth of 21 feet, the existing main basin to permit the longer ships to more safely get in and tie up to the Port Washington pier.

The cost of this project to the Federal Government is $2,515,000.

At the time of the report it was determined that some local benefits would be obtained by reason of safer conditions for purely local small boat traffic, and a cash contribution of $160,000 was included in

the report. As I pointed out, the primary product or cargo carried into this harbor is coal for the public-utility plant located here.

This report was submitted to the various agencies.

The Bureau of the Budget felt that since this was for the convenience and for the benefit of this one public utility that a greater share of the cost should be borne by that utility.

I think I should read their comments since they have not been printed in the document:

> The primary purpose of the recommended project modification appears to be the accommodation of vessels delivering coal to the Wisconsin Electric Power Co. dock. It has been the policy of the United States to require substantially greater local participation in navigation improvement where benefits are expected to accrue mainly to a single organization. The report on Fort Washington Harbor, which requires only a 6 percent local contribution, based on the assumption that 6 percent of the annual benefits are of a local nature, does not contain justification to warrant an exception to this policy.

They conclude:

> I am authorized by the Director of the Bureau of the Budget to advise you that while there would be no objection to submission of the report to the Congress, for the reasons stated herein and on the basis of information contained in the report, authorization of the modification of Port Washington Harbor would not be in accord with the program of the President.

In transmitting this report to the Congress, the Secretary of the Army made this remark with respect to the Bureau of the Budget comments:

> The Chief of Engineers has given further consideration to his report in view of the comments of the Bureau of the Budget. He advises me that the single organization involved in the question of local participation is a steam-generating plant which distributes electric energy to the public in an area of about 11,000 square miles. The proposed project would result in savings in the transportation cost of coal needed by this public utility. These savings presumably will be passed on to the public in the form of reduced power rates which are prescribed by State regulations pertaining to public utilities. Thus, these project benefits are believed to be public benefits of the type usually considered in justifying Federal expense.

The Secretary of the Army goes on to state:

> If the public utility is considered to fall within the category of a private interest, the cost allocation should be made on the basis of proportional benefits. In this instance, the benefits from savings in transportation to the public utility are 75 percent of the total benefits. In calculating the local share of the cost, as has been done in other cases, a 50 percent factor would be applied. Thus, the local contribution would be one-half of 75 percent of the cost, or 37½ percent. This is in addition to the 6 percent allocation arising from benefits accruing to the recreational craft.

Senator HOLLAND. The 6 percent is the $160,000?

Colonel ALLEN. That is correct, sir, in the original report.

I would like to point out that the authorization of the original Port Washington project—the benefits which accrued to the project as of that time were accruing to the same utility to which these will accrue, and the principle of a public utility being in the general interest, rather than private interest, was accepted at the time of the adoption of the original document.

So, we have this to resolve: That if the public utility, which is the primary user of this port, is to be considered a private interest—it will be enjoying private benefits from the project—the cost of the project would be increased from 6 to 43½ percent.

Senator HOLLAND. You mean the contribution?

Colonel ALLEN. The contribution; yes, sir. The cost of the project to local interest.

Senator BUSH. Thank you, sir.

Are there any questions?

At this point in the record I would like to introduce a telegram from the mayor of the city of Port Washington, Mr. John H. Kaiser, and also a letter by him, both addressed to the Honorable Senator Alexander Wiley.

(The telegram and letter referred to are as follows:)

PORT WASHINGTON, WIS., *July 12, 1954.*

Hon. ALEXANDER WILEY,
United States Senator,
Washington, D. C.

DEAR FRIEND: Please introduce an amendment to the Senate public works bill to include approval of the Port Washington, Wis., harbor improvement project as recommended by the United States Army Engineers with the local interests contributing 6 percent of the total cost, right away, or we might have to wait for the next session of Congress. Thank you sincerely.

Yours,

JOHN H. KAISER,
Major, City of Port Washington.

P. S.—Kindly mention this important project for Port Washington to Senator Martin of Pennsylvania.

CITY OF PORT WASHINGTON,
Port Washington, Wis., July 12, 1954.

Senator ALEXANDER WILEY,
Washington, D. C.

DEAR SENATOR: Thank you very much for all you have done and hope to continue to carry on with us urging the approval of the Port Washington Harbor project. You undoubtedly know the Public Works Committee in executive session did not include our project in the omnibus bill, since the report was transmitted to Congress at such a late date. The committee expressed the hope that the Senate Committee on Public Works would consider it and hold hearings on our harbor project. Should the Senate take favorable action, the House conferees would agree to its inclusion in the omnibus bill in conference. The action of the Committee on Public Works was not an expression of opposition to the project, but rather an expression of a desire that further hearings be held on the Port Washington Harbor project.

I received the above information from Washington, D. C., and it would be a great disappointment to yours truly and the citizens of this progressive and friendly city, should we be left out of the 1954 omnibus bill after I, as mayor of Port Washington and vice president of the Great Lakes Harbor Association for 40 years, fought for and promoted the St. Lawrence seaway project. If Port Washington is to benefit from the seaway, our harbor needs these improvements.

We are planning to promote and develop overseas and Canadian trade, outgoing and incoming when the St. Lawrence Waterway is completed. We are one of Wisconsin's best industrial cities.

My first election as mayor was in 1914 and have served the city as mayor the biggest part of the time to date, 1954.

Kindly give this your support to have our harbor project included in the Senate bill. With kindest personal regards, I am

Sincerely yours,

JOHN H. KAISER, *Mayor.*

CITY OF PORT WASHINGTON,
Port Washington, Wis., July 14, 1954.

Hon. ALEXANDER WILEY,
United States Senator, Washington, D. C.

FRIEND: I am enclosing a brief of the city of Port Washington, Wis., requesting approval of plan Z, as recommended by the Corps of Engineers, United States Army, for the Port Washington Harbor, and wish these plan Z harbor improvements, which are very necessary and so recommended by the United States

Army Engineers and the Great Lakes Carriers Association, Admiral Spencer, president. Cleveland a No. 1 harbor on Lake Michigan, our present tonnage, 1¼ tons annual and we'll be out to double it. And God knows we need it. We are in hopes to get it and never forget it.

Yours very truly,

JOHN H. HARRIS, *Mayor.*

BRIEF OF THE CITY OF PORT WASHINGTON, WIS.

IN THE MATTER OF CONGRESSIONAL APPROVAL OF PORT WASHINGTON, WIS., HARBOR IMPROVEMENT PROJECT AS RECOMMENDED BY THE CORPS OF ENGINEERS, UNITED STATES ARMY, SO-CALLED PLAN Z

I. Plan Z, its effect on existing project, etc.

The report of the Corps of Engineers on Port Washington, Wis., Harbor, under recommended plan Z, as approved, recommends modification of the existing harbor project to provide for extending and raising the north breakwater and removing a part of the south breakwater, at an estimated Federal cost of $2,515,000, subject to certain items of local cooperation, including a cash contribution of 6 percent of the cost of construction.

II. History of Port Washington Harbor and need for improvements

The city of Port Washington, Wis., is located on the shores of Lake Michigan, about 30 miles north of Milwaukee and 115 miles north of Chicago. It has a population of 5,500, with some 2,250 persons employed and working in its industries and stores. Among its leading industries are the following: Harnischfeger Corp., manufacturer of prefabricated homes; Wisconsin Chair Co., upholstered furniture; Meta Mold Co., patented plastics used for outdoor advertising; Wisconsin Electric Power & Light; Kwik Mix Co., cranes, concrete mixers, and shovels; J. E. Gilson Co., iron and steel castings; Bolens Products, iron and steel home and farm machinery; Usow Manufacturing Co., women's and men's garments; Simplicity Manufacturing Co., tractors for farm and garden; Smith Brothers Fisheries, restaurant and manufactured caviar, etc.

Port Washington has at present a fine harbor which handles each year about 1,250,000 tons, principally coal for the Wisconsin Electric Power Co. At one time lumber was shipped into the city and will be again when the contemplated improvements to the harbor are made.

During the past years, since 1935 when the Wisconsin Electric Co., located its large powerplant at Port Washington, the utility has experienced much trouble in the unloading of coal at its waterfront dock due to heavy storms with the resultant difficult and dangerous conditions in the inner harbor. Each year there have been many times when the coal boats have been forced to leave the inner harbor during storms and high waters to prevent serious damage and injury to the boats. During these heavy storms the coal boats must leave the inner harbor and anchor out in the open lake to ride out the storm or else go to Milwaukee to unload the coal there for transshipment by rail to Port Washington. This procedure is very costly and reflects directly on the rates charged the consumers for electricity and power furnished by the Wisconsin Electric Co. The rates of this utility are fixed by the Wisconsin Public Service Commission.

In the past, boats traveling north from Chicago or Milwaukee, or with the southbound, have sought refuge in Port Washington Harbor only to discover that under existing conditions it was safer in the open lake. Recreation boats and fishing fleets have also experienced difficulty at Port Washington Harbor in times of storms and for this reason have located in other harbors. If existing conditions are corrected many of these boats will make Port Washington their home port.

Due to the bad conditions which prevail in the harbor during storms, Port Washington requested Federal aid in making needed improvements. In 1950 a series of tests on a model of Port Washington Harbor were made at the Waterways Experimental Station at Vicksburg, Miss. After exhaustive tests, the Army engineers in 1951 published the results of these tests which were referred to the United States district engineers at Milwaukee for further study and recommendation. It was decided that so-called plan Z was the best one to adopt to remedy the situation at Port Washington Harbor. Colonel Kumpe, district engineer at Milwaukee, recommended plan Z with the stipulation that local interests pay 6 percent of the costs of construction or about $160,000. Port Washington agreed and has the money ready and available for this purpose. This recommendation was then sent to the division office of the Great Lakes Division, Corps of Engineers, and Colonel Trower, division engineer, concurred in approving plan Z. The Board

of Engineers for Rivers and Harbors, the Chief of Engineers, Governor Kohler of Wisconsin, the Great Lakes Harbors Association, Admiral Spencer, president of the Lake Carriers Association, and the captains' committee of that association, likewise, all approved and recommended plan Z for the improvement of Port Washington Harbor.

Plan Z was then sent to the Bureau of Budget, along with the recommendations of the Corps of Engineers. The Bureau of the Budget in commenting on the report of the Corps of Engineers expressed the view that, since a large share of the benefits accrue to a single organization, greater local participation in payment of costs should be required. The Secretary of War then transmitted the report, together with the comments from the Bureau of the Budget, to Congress.

Discussion of comments on report by the Bureau of the Budget

Port Washington respectfully suggests that the payment of 6 percent toward the costs by local interests if fair and equitable. While it is true that a large share of the benefits accrue to a single organization, the Wisconsin Electric Co., nevertheless these benefits actually are enjoyed by most of the people of the State of Wisconsin. The electric company distributes the electricity and power generated at the Port Washington plant to almost the entire State of Wisconsin. Since the electric company is a utility regulated by the State of Wisconsin, its rates are fixed by the Wisconsin Public Service Commission. Thus, if the utility is compelled to pay a larger share of the costs as suggested by the Bureau of the Budget the people of the State of Wisconsin generally would be required to pay the increase in higher rates. This utility serves both homes and many important industries throughout the State. During World War II, this utility was considered so important to the war effort that Port Washington, at its own expense, employed five policemen to guard against sabotage of the utility.

There is ample precedent for requiring local interests to pay only 6 percent of the cost, even though a single industry benefits most from the improvements. In the so-called Trenton Channel project, this committee and Congress approved a 6 percent contribution by local interests even though the benefits accrued largely to a single organization. The facts in the Trenton Channel improvement project matter are very similar to the situation at Port Washington Harbor. In the Trenton Channel case, a section of the Detroit River was involved.

Insofar as the comments of the Bureau of the Budget with reference to fishing and recreation craft are concerned, it should be pointed out that groups at Milwaukee and elsewhere have indicated their desire to locate at and use the facilities of Port Washington Harbor if and when the improvements are made at the harbor. The use of Port Washington Harbor by fishing boats and recreation craft will boom if this Congress will only approve plan Z as recommended and approved by the Corps of Engineers.

The attention of this committee is also invited to the fact that the city of Port Washington has for 40 years fought for and promoted the St. Lawrence seaway project. If Port Washington is to benefit from the seaway its harbor must be improved within the next 5 or 6 years. The city is planning to promote and develop overseas and Canadian trade.

Conclusion

The city of Port Washington respectfully requests this honorable committee to recommend approval by Congress of plan Z as recommended by the Corps of Engineers for the improvement of Port Washington, Wis. Harbor. Port Washington believes that approval of plan Z is essential and necessary for the future growth and development of its fine city. Port Washington because of its low tax rates, fine schools, good government, diversified industries, stable employment situation, fine parks and modern, new outdoor swimming pool, will grow and expand tremendously in the coming years. One of Port Washington's assets is its fine harbor which needs only the improvements recommended by the Corps of Engineers to make it attractive to foreign and domestic shippers. The benefits that will accrue to Port Washington and to the people of the State of Wisconsin will more than compensate for the cost of such improvements. The St. Lawrence seaway is another reason for making harbor improvements now in order that Port Washington may obtain its share of the increased domestic and world trade and water-route shipments that will come to the Middle West.

This committee's recommendation for congressional approval of plan Z, as recommended by the Corps of Engineers, will be greatly appreciated by the city of Port Washington and its fine people.

Respectfully submitted.

PORT WASHINGTON, WIS.,
By JOHN H. KAISER, *Mayor.*

Senator BUSH. It might be of interest to the committee to note the following sentence from the mayor's letter:

My first election as mayor was in 1914 and have served the city as mayor the biggest part of the time to date, 1954.

I don't know what constitutes the biggest part of the time, but evidently he has been a pretty good public servant up there.

Are there any further questions on the Port Washington project?

If not, without objection, we will insert this memorandum in the record.

(The memorandum referred to is as follows:)

PORT WASHINGTON HARBOR, WIS.

(H. Doc. No. 446, 83d Cong.)

Location: On the west shore of Lake Michigan, 29 miles north of Milwaukee.

Report authorized by: House Committee on Public Works resolution adopted April 13, 1948.

Existing project: Provides for a north breakwater and shore connection 2,537 feet long; a south breakwater extending 456 feet into the lake from a privately owned south breakwater to form an entrance 350 feet wide; a turning basin 750 feet wide and 21 feet deep; an entrance channel 2,400 feet long and 21 feet deep; a west inner basin 18 feet deep and a north inner basin 18 feet deep.

Plan of recommended improvement: Provides for extending the existing north breakwater 1,280 feet; increasing the top elevation of the existing north breakwater to 10 feet above low water; removing 458 feet of the south breakwater to 24 feet below low water; enlarging the outer basin and deepening to 21 feet, and relocating channel lines to correspond with the improvements.

Estimated cost:

	Federal	Non-Federal	Total
Project document (December 1952)	$2,515,000	[1] $160,000	$2,675,000
Current (October 1953)	2,515,000	[1] 160,000	2,675,000

[1] Cash contribution.

Local cooperation: Furnish all lands, easements, and rights-of-way; hold and save the United States free from damages; and contribute in cash 6 percent of the cost of construction presently estimated at $160,000.

Project economics:

	Project document
Annual charges:	
Interest and amortization	$95,500
Maintenance	2,000
Total	97,500
Annual benefits:	
Savings on transportation	77,675
Fishing	17,725
Recreational	3,350
Harbor of refuge	5,000
Total	103,750
Benefit-cost ratio	1.06

Comments of the Bureau of the Budget: No objection to submission of the report to Congress. Raises certain questions concerning the economic analysis and the cost allocation. It notes that it has been the policy of the United States to require greater local participation in projects where benefits accrue mainly to a single organization, and that the derivation of benefits accruing to small craft does not appear adequately supported. For these reasons it states that authorization would not be in accord with the program of the President.

Remarks: The single organization involved in the question of local participation is a steam generating electric plant serving an area of 11,000 square miles. The proposed project will result in savings in transportation of coal for the public utility which presumably will be passed on to public as reduced power rates as prescribed by State regulations. Therefore, the project benefits are believed to be of a type usually considered in justifying full Federal participation.

If the public utility is considered to fall within the category of a "private interest," the cost allocation should be made on the basis of proportional benefits. In this case 75 percent of the benefits accrue to the public utility. As has been done in other cases where benefits accrue to a single organization, the cost allocation in this case would be 50 percent, or 37½ percent of the construction cost. This would be in addition to the 6 percent allocated as a result of recreational craft benefits.

Senator BUSH. Next is the Great Lakes local protection.

General ITSCHNER. Colonel Starbird will take this project.

Senator BUSH. Colonel Starbird.

Colonel STARBIRD. I would like first to explain the map before you, so you may have a better understanding of what it portrays.

This is the Great Lakes area. North is to the upper right-hand corner. The area of concern in this report is the western end of Lake Erie. This is a blowup of that area, the western end of Lake Erie. At the bottom of the map are further blowups of particular green spots shown on the upper map.

The report on the Great Lakes water levels actually covers three projects: Detroit Beach and Lakewood-Luna Pier in the State of Michigan, and Point Place in the State of Ohio.

All three are at the extreme western end of Lake Erie.

By two resolutions in 1952 the House Public Works Committee called on the Chief of Engineers to survey the Great Lakes. I would like to quote from the second of those resolutions to define the objective of the survey. I quote from a resolution dated June 26, 1952:

> With a view to determining the property damage resulting from changes in levels of the Great Lakes and the feasibility of measures to prevent the recurrence of damage.

Based on that directive, the corps undertook two types of surveys:

First, a long-range survey to study the reasons, the causes of variant in the level of the lakes, and the long-range measures that might be taken to remedy. As you can imagine, such a study is very complex in that it has to consider both the interests that are benefited by high and low water and those that are hurt by such fluctuation.

The variant, incidentally, in this end of the lake can amount to as much as 8 to 10 feet.

The second type of study undertaken was of particular localities that were suffereing repeatedly from heavy damage, to see whether there were some measures that might be taken to remedy those damages.

The particular report you have under consideration today is of the second category. In this report we studied 7 localities, rejected 4 as not being capable of developing an acceptable and economically justifiable project. We recommended projects for the three localities I have already mentioned.

The first locality where improvement is recommended is Detroit Beach. At Detroit Beach there are about 500 residences and certain small businesses in a low-lying area adjacent to the lake. In the high waters of 1951 and 1952, $400,000 worth of damage was done in this area.

We believe it feasible and economically justified to build a combination of dike and levee to give protection to this area against the reasonably frequent storms.

The cost of such protection to the Federal Government would be $529,100.

Local interests would be expected to furnish lands, rights-or-way, and make a small cash contribution to compensate for land enhancement. The cost to local interests is estimated as $72,900 including a local cash contribution of $46,000.

The situation at Lakewood-Luna Pier area is basically the same but is a little larger area. There are 550 residences involved, certain businesses, and an agricultural area. Again it is a flat and relatively low-lying area.

Here the damages amounted to over a half million dollars in 1951 and 1952.

Senator BUSH. Each?

Colonel STARBIRD. No, sir; for the 2 years.

That was a peak period in the levels of the lake, and that is the sum of the damage for the 2 years.

The estimated cost again of putting in similar works in this locality would be $1,013,000 to the Federal Government and $127,000 to local interests.

Here again there would be a local contribution because of land enhancement now estimated at $76,200.

At Point Place again the situation is similar. The damages were smaller. The area is smaller. The damages were about $175,000 for the 2 years concerned.

The estimated cost would be $352,200, and the estimated cost to local interests would be in the neighborhood of $53,900, including a cash contribution of $43,500.

Each of these projects would have a favorable benefit-to-cost ratio.

At Detroit Beach the benefit-to-cost ratio would be 1.75 to 1.

At Lakewood-Luna Pier it is 1.53 to 1.

At Point Place it is 1.49 to 1.

The States and the Department of Agriculture reviewed this report and offered either no objection or concurred in the report.

The report was reviewed by the Bureau of the Budget. The Bureau of the Budget commented by a letter dated May 10, 1954. With your permission, I would like to read from two paragraphs, two of the latter paragraphs, in the letter:

> The Bureau of the Budget considers projects of the type recommended to be an expansion of the Federal flood control policy enunciated in section 1 of the Flood Control Act of June 22, 1936, which states "It is hereby recognized that destructive floods upon the rivers of the United States constitute a menace to the national welfare" and which apparently contemplate Federal control projects designed primarily to protect areas from high-river stages caused by excessive or unusual precipitation.
>
> General legislation to specifically expand the policy statement in section 1 of the 1936 Flood Control Act to cover this type of project on the Great Lakes was introduced in the 80th Congress but failed of passage. The Bureau of the Budget believes that it would be desirable for the Congress, before authorizing these projects, to examine the extent, if any, to which the Federal Government would be justified in expanding its responsibilities for flood control to cover inundation of property aggravated by or due to wind or tidal effects. This examination should include, among other things, consideration of relationship between cost sharing on this type of work as against such programs as beach erosion control.

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It should also take into account the additional cost to the Federal Government that would result from such an extension of its responsibility.

The Secretary of the Army forwarded the report to the Congress pointing out the comment of the Bureau of the Budget.

Senator HOLLAND. Mr. Chairman.

Senator BUSH. Yes, Senator Holland.

Senator HOLLAND. Colonel, of course, the beach erosion program has been specially authorized, but does that not limit Federal participation to a very small part of the total investment required in each case?

Colonel STARBIRD. It does, sir. Colonel Allen can give the exact terms, if you would care to have them.

Senator HOLLAND. Not to exceed a third?

Colonel ALLEN. One-third of the cost of protecting publicly owned shores.

Senator HOLLAND. And it must not be privately owned shores?

Colonel ALLEN. That's right.

Senator HOLLAND. So there is no precedent at all for any such elaborate venture as would be undertaken here to protect the bulkhead and protect the lakefront and ocean front areas from damage that results from wind, or tide, or storms, where the structures are built on relatively low-lying territory?

Colonel ALLEN. Under a strict application of the beach-erosion laws.

Senator HOLLAND. On what theory is this reported to become part of the Omnibus Flood Control and Navigation Act?

Colonel STARBIRD. We reported it because we were called upon to investigate the situation. Our interpretation of the part of the resolution, which I first read, was that we should determine the cause of damage and determine whether or not it was feasible to remedy the cause. We believe it is feasible. There has been one prior case on the Great Lakes in this general area—the Howard Farm-Reno Beach project, where such work was authorized in 1948.

Senator HOLLAND. You are making no recommendation on the question of the enlargement of the general policy?

Colonel STARBIRD. We are not covering the policy.

Senator KUCHEL. Mr. Chairman.

Senator BUSH. Senator Kuchel.

Senator KUCHEL. May I for my own edification develop that?

Do I understand, gentlemen, we have a statute under which with respect to beach erosion the local publicly owned beaches are responsible for two-thirds of the cost of any project? That is the statutory requirement?

Colonel ALLEN. The statutory requirement under the beach-erosion law limits Federal participation to one-third of the cost of protecting publicly owned shores. All other shores protected must be done so by local interests and they must provide the remaining two-thirds of the publicly owned shores.

Senator KUCHEL. Have there been any exceptions to that general statutory requirement?

Colonel ALLEN. Not under the beach-erosion law.

Senator KUCHEL. When was that enacted? Just roughly?

Colonel ALLEN. Public Law 727 of the 79th Congress in 1946.

Senator KUCHEL. Since that time it has been the general policy throughout all beach-erosion projects?

Colonel ALLEN. That is correct, sir, and it was on that basis on which all of these beach-erosion projects in this House bill were so reported.

Senator HOLLAND. It has been not only the general policy, but it has been very difficult to secure approval of any project developed under that general policy. Even with a commitment of one-third of the expenditure. Is that correct?

Colonel ALLEN. Yes, sir.

Senator KUCHEL. Why is that, Senator?

Senator HOLLAND. Because the thing is so large. You see, there are 5,000 miles of ocean frontage and there are literally billions of dollars worth of property that are endangered by tide and by storm. If we embark on any general and large basis, the amount of expenditure is unforeseeable and the Federal Government at least as long as I have been in Congress—and I believe I came in immediately after the passage of this act—has been very slow to approve any projects whatsoever; slower than I think they should be. But nevertheless, they have been slower to do it even under that very small amount of participation, and a participation which is limited to the protection of public beaches.

Senator KUCHEL. I understand.

Senator BUSH. Are these public shores you pointed out in these three locations?

Colonel STARBIRD. I do not know the answer with respect to the shore problem. However, related to that is the fact that these works are not designed to protect the shores, but are rather designed to give protection against flooding to the area behind the shores.

Senator BUSH. May I ask the Senator from Florida a question there? The colonel just pointed out the purpose here was not to protect the shores so much, but to protect the area behind the shores. Does that seem to be a departure from the practice?

Senator HOLLAND. Yes. Quite definitely so, because there is not any such program I know about that has been accepted for the coastline of the Nation or of the Great Lakes, with the exception of the fact that Mr. Bassett tells me there has been one project, and I presume it was a trial project on one of the Great Lakes. I do not know what the result of that has been, but certainly I think the Bureau of the Budget are completely correct in calling our attention to the fact that a departure in policy would be effected by going into this class of operation in general. The Congress might want to do it. You understand that. The Congress has the power to do it, but it is certainly a departure.

Senator BUSH. The committee is glad to have Senator Ferguson, of Michigan, here this morning, and also Congressman George Meader, of Michigan.

Senator Ferguson, would you like to say something at this point?

STATEMENT OF HON. HOMER FERGUSON, UNITED STATES SENATOR FROM THE STATE OF MICHIGAN

Senator FERGUSON. I would like to have Congressman Meader speak on this project, because it is in the Second District of Michigan. I have heard the discussion here this morning in relation to the legal question, and I must say I am not ready to testify on that legal point.

But I did have in mind—and I was just talking to Congressman Meader—the question of the protection of this shoreline could be considered in relation to the depth of the canals that we have for transportation on the Great Lakes.

If we did not allow the water to go back over and become part of the marshland you have deeper navigation in the stream itself than in the lake. In this particular place the Congressman would be able to explain it, and I hope you will give him a few minutes so that he can do that.

Senator BUSH. We will be glad to do that.

Senator HOLLAND. May I make a comment?

Senator BUSH. Yes, Senator.

Senator HOLLAND. I am not at all out of sympathy with the examination of this situation, but I wanted to call attention to the fact that it would take a very material elaboration of the purposes of the present flood-control law to have it reach in general to this kind of operation. It is thoroughly within the authority of the Congress to do that if it wishes to do so.

If I may be allowed to say so, I think that the more adequate way to consider it is not for navigation, but as an extension of protection for flood control to areas that have not been heretofore protected under former legislation, which the Congress has a complete right to do.

Senator FERGUSON. Yes.

Senator BUSH. Congressman Meader, we will be glad to hear from you at this point.

STATEMENT OF HON. GEORGE MEADER, MEMBER OF CONGRESS FROM THE SECOND CONGRESSIONAL DISTRICT OF MICHIGAN

Mr. MEADER. Mr. Chairman and members of the committee, the two projects in which I am interested are Lakewood-Luna Pier and Detroit Beach. They are on the stretch of the Lake Erie shore between Detroit and Toledo, in Monroe County in my congressional district.

In March 1952, those areas were damaged by severe floods. Those floods resulted from a combination of the high level of Lake Erie, high winds, the shallowness of the lake at that point, and the lowlying land on the western shore. Extensive damage was done.

I want to mention one area not involved in this legislation, but similar to those which are. It is the village of Estral Beach, where 80 homes were under water. I personally inspected that area as well as the two areas involved here. In 1952, following the floods, the Corps of Engineers spent something over $250,000 from their emergency funds to repair and improve existing dikes at Estral Beach. In a sense that project is a precedent on the legal question involved here. In addition there are two other projects about which, I believe, the Corps of Engineers has testified, indicating that projects to control floods resulting from high waters and storms on lakes, have been heretofore undertaken under existing legislation.

In recommending Lakewood-Luna Pier and Detroit Beach, the Corps of Engineers simply carried out instructions contained in a resolution adopted by the Public Works Committee of the House on June 26, 1952, ordering them to study the levels of the Great Lakes and the means of controlling and regulating those levels.

I quote from the resolution:

Also property damage resulting from changes in levels of the Great Lakes and the feasibility of measures to prevent the recurrence of damage.

I do not know how many projects they studied, but they recommended 3, 2 in my district and 1 in the adjoining district near Toledo represented by Congressman Reams.

Senator FERGUSON. He is the Congressman from Ohio.

Mr. MEADER. Yes, from Toledo, Ohio.

I think the name of that project is Point Place.

At the time these projects were recommended the St. Lawrence seaway was not law. In my judgment the fact that the St. Lawrence seaway is now a reality renders these projects even more important than they were before.

There is a continual conflict of interest between navigation interests, and riparian owners. The navigation interests, of course, desire to have the levels as high as possible so that deep-draft navigation is permissible. With the possibility of oceangoing vessels coming into the Great Lakes, it is even more important that we have deeper channels than we have had in the past.

These two projects, namely, Detroit Beach, a half a million dollar project, and Lakewood-Luna Pier for roughly, $1 million, are important in the light of the St. Lawrence seaway becoming a reality. To the extent that the higher dikes protect these low-lying lands from high water levels, there will be less necessity for deeper dredging of the channels in order to permit deep-draft vessels to use the St. Lawrence seaway.

In other words, the reduced cost of dredging to permit deep-draft vessels to use the channels should be offset against the cost of these projects, those areas being, so to speak, the weak link in the chain of the entire Great Lakes waterway system.

I do not think I am equipped to discuss the legal question involved. I think the Corps of Engineers considered it very carefully, and its testimony about not only other projects which have been already undertaken under existing legislation, but the wording in the Flood Control Acts of 1944, authorizing surveys of "damage from wind or tidal effects," should certainly, very seriously be considered by the committee as forming a legal basis for undertaking projects of this character.

The House Public Works Committee did not incorporate these two projects in its omnibus bill, which perhaps will come up this week in the House.

Senator HOLLAND. Did you have a hearing before them on this?

Mr. MEADER. Yes. Unfortunately I got notice of the hearing after it was held, so that I did not appear in person. But I did submit a statement. Congressman Mack of the Subcommittee on Flood Control of the House Public Works Committee reserved the right for me to make a statement.

If I might, I would like to include that statement with my testimony here.

However, I have made some study since that time and I might say I have conferred with a professor of civil engineering at the University of Michigan, who is working with the Corps of Engineers on the Great Lakes level study. He assured me that these projects would be valid and appropriate in the light of that study.

In other words, the recommendation of the Corps of Engineers would not have to be changed in any respect, although at the time the report was prepared and filed the St. Lawrence seaway was not a reality.

Senator HOLLAND. May I make a comment off the record?

Senator BUSH. Yes. Off the record.

(Discussion off the record.)

Senator BUSH. On the record.

Senator FERGUSON. I would like to call attention to two precedents on the thing that are in existence.

The project for the protection of Reno Beach-Howard Farms area and adjacent areas in Lucas County, Ohio, and floods caused by frequent windstorms, and from increase in the lake level of Lake Erie, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document 554 of the 80th Congress, at an estimated cost of $330,000.

That is in the 1948 act.

Another project was a project—

for flood control along Lake Pontchartrain in Jefferson Parish, La., which is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document 691, 79th Congress, 2d session, at an estimated cost of $900,000.

That is the 1946 act.

Senator BUSH. Off the record.

(Discussion off the record.)

Senator BUSH. The committee will be in order again, please.

Do you have anything further?

Senator FERGUSON. I do not know of anything more.

Senator BUSH. Congressman, does that complete your testimony?

Mr. MEADER. Yes, sir.

Senator BUSH. Would you like to file your statement complete in the record?

Mr. MEADER. If I might.

Senator BUSH. Without objection, it will be inserted in the record.

(The prepared statement of Mr. Meader is as follows:)

STATEMENT OF REPRESENTATIVE GEORGE MEADER

Mr. Chairman, I appreciate the opportunity to appear here and to urge favorable consideration of the report of the Army engineers, House Document 424, 83d Congress, recommending the authorization of flood-control projects at Detroit Beach, Mich., Lakewood-Luna Pier, Mich., and Point Place, Toledo, Ohio.

The first two projects—Detroit Beach and Lakewood-Luna Pier—are located in Monroe County in the Second District of Michigan, which I have the honor to represent.

Mr. Chairman, the testimony of Colonel Starbird and Mr. Brennan of the Corps of Engineers, and the report itself, have covered fully and clearly the character of the projects and the need for the protection to this western shore of Lake Erie between Detroit and Toledo. I wish to add to that evidence, however, the voices of my constituents in the area who, since March 1952, have lived under the threat to their homes that there might be a recurrence of the disastrous flood which they suffered then.

I can add a plea from my personal observation. I visited the stricken area during the March 1952 flood, flying over it by plane and then inspecting it on foot. I saw the homes inundated by water trapped behind the beaches which were not adequately protected.

I concur in the views of the expert witnesses and in those of my colleague, the Honorable Frazier Reams, that the legal technicality suggested by the Bureau of the Budget should not cause the committee to withhold approval of the Engineers' recommendations. Similar projects previously approved under the present

language of the law were described by the Engineers. They also relied on the language in the flood control acts from 1944 on authorizing surveys of "damage from wind or tidal effects." In addition I would like to point out that the resolution of this committee, adopted June 26, 1952, specifically applied to "property damage resulting from changes in levels of the Great Lakes and the feasibility of measures to prevent the recurrence of damages." The projects before you recommended by the Engineers, are thus in strict accord with the instructions of this committee.

The approval of the St. Lawrence seaway project and the bearing of water levels upon the navigability of the Great Lakes gives to these projects a significance beyond that they possessed in 1952 when the survey was ordered. These locations are among the most vulnerable in any situation which may exist in the future involving the regulation of the levels of the Great Lakes.

I certainly hope the committee will act favorably onthe report and provide the protection so urgently needed for the homes and farms in the affected areas.

Senator FERGUSON. If we can find any more precedents on the law we would like to file them.

Senator BUSH. Yes, we would be very glad to have anything you can submit in respect to that matter.

Mr. MEADER. I would like only to add that the House Public Works Committee did not disapprove of these projects on their merits, but only because of the legal question raised by the Bureau of the Budget.

Senator BUSH. Without objection, we will insert in the record the memorandum descriptive of the project.

(The document referred to is as follows:)

WATER LEVELS OF THE GREAT LAKES AND LOCAL FLOOD-PROTECTION PROJECTS

(H. Doc. 424, 83d Cong., 2d sess.)

Location: Detroit Beach, Mich., Lakewood-Luna Pier, Mich., and Point Place, Toledo, Ohio, are all located at the west end of Lake Erie.

Report authorized by: House Committee on Public Works resolution, June 26, 1952.

Existing project: None.

Plan of recommended improvement:

Detroit Beach: Lakefront dike 3,500 feet long with north and south dikes and modification of the existing interior drainage facilities.

Lakewood-Luna Pier: Lakefront dike 5,600 feet long with north and south dikes, modification of the existing interior drainage facilities and a navigation structure in the south dike.

Point Place, Toledo: Lakefront dike 3,900 feet long and modification of the existing interior drainage facilities.

Estimated cost:

	Federal	Non-Federal		Total
		Cash contribution	Other	
Detroit Beach:				
Project document	$508,400	$44,200	$25,900	$578,500
Current (November 1953)	529,100	46,000	26,900	602,000
Lakewood-Luna Pier:				
Project document	977,000	73,500	49,000	1,099,500
Current (November 1953)	1,013,000	76,200	51,000	1,140,200
Point Place, Toledo:				
Project document	339,600	42,000	10,000	391,600
Current (November 1953)	352,200	43,500	10,400	406,100

Local cooperation: Provide without cost to the United States all lands, easements, and rights-of-way; hold and save the United States free from damage; maintain and operate after completion; and contribute cash in amounts indicated above.

Project economics:

	Project document	Current (November 1953)
Annual charges:		
Detroit Beach	$23,400	$24,400
Lakewood-Luna Pier	$43,700	$45,200
Point Place, Toledo	$17,800	$18,300
Annual benefits:		
Detroit Beach	$34,300	$42,600
Lakewood-Luna Pier	$54,100	$69,000
Point Place, Toledo	$22,450	$27,300
Benefit-cost ratio:		
Detroit Beach	1.47	1.75
Lakewood-Luna Pier	1.24	1.53
Point Place, Toledo	1.26	1.49

Comments of the Bureau of the Budget: Considers projects of this type an expansion of policy stated in Flood Control Act of 1936. General legislation to specifically expand the policy statement failed of passage in 80th Congress. Bureau of Budget believes Congress should examine extent to which the Federal Government would be justified in expanding its responsibilities for flood control to cover inundation of property aggravated by or due to wind or tidal effects. Subject to consideration of foregoing, the Bureau of Budget has no objection to submission of the report to Congress.

Remarks: The construction of the proposed floodwalls will provide a high degree of protection by eliminating most of the anticipated damages. Local interests were advised that complete flood protection is not provided. However, they do not desire for the walls to be constructed to a higher elevation in order to retain access to and view of Lake Erie.

AMAZON CREEK, OREG.

Senator BUSH. We will proceed to a discussion of the Amazon Creek project in Oregon.

Colonel STARBIRD. The Amazon Creek project is one that is actually under way, partly constructed, and the recommendation you have is for a modification of that project. Amazon Creek has 62 square miles of drainage area. The city of Eugene, a city of 40,000 individuals in 1950, but a very rapidly growing city, is located in the upper reaches of the creek.

The overall length of Amazon Creek is 24 miles. The old channel of the creek was directly to Long Tom River, without any diversion of any kind into Fern Ridge Reservoir. The existing project was authorized in 1946 and modified somewhat in 1950, as a plan which embraced three elements. First element of the plan was to improve the channel from Long Tom Creek upstream through the city of Eugene.

A second element of that plan was to construct a diversion structure and a diversion canal to spill floodwaters into Fern Ridge Reservoir.

A third element of the plan was to construct certain lateral canals for the purpose of benefiting drainage. If that plan were completed at the present time as visualized at the time of authorization it would cost the Federal Government $1,038,000.

The plan was restudied in 1951 and certain modifications were recommended. However, since 1951 certain changes have taken place in the area. As a result, the Chief of Engineers' letter forwarding the report and dated this year mirrors the effects of those developments which have occurred.

The developments basically are these:

Local interests have improved a part of the lower channel at their own expense. They have indicated that, if further improvement is to be carried out, they will do it. They have also improved a section of the middle channel. Both of those sections were contemplated originally for Federal improvement with local assistance.

The Federal Government has had appropriated $617,000 to date. With that money it has completed the diversion structure and the diversion canal. In addition, it has improved the upstream reaches of the channel except for a 5,800-foot section within the city of Eugene. Developments along the channel in the vicinity of Eugene, and our engineering studies completed since the original authorization, indicate that our original plan for this 5,800 feet is inadequate.

We planned a channel which was riprap earth channel and not a concrete channel. We planned a channel which would take care of a flood having a probability of occurrence once in every 50 years.

Now we consider the channel should be built of reinforced concrete and should be capable of handling the floods which will have a probability of occurring once every 100 years.

The recommendation you are now considering in the Chief of Engineers' report is one which would permit the modification of the existing plan to construct a reinforced concrete channel of a slightly larger section over this 5,800-foot reach of the river. The remaining work to be accomplished in the way of construction would have a total cost of $350,000. However, there is certain land enhancement connected with that cost.

As a result thereof, the local interests would be expected to pay in cash toward the cost of construction. Currently estimated at $56,400.

The overall Federal cost of the work to include that already appropriated for, therefore, would become $893,600 in place of the $1,038,000 of the original cost of the authorized project.

The modification would have a benefit-cost ratio of 1.26 to 1.

The Department of Agriculture, the Department of the Interior, and the State of Oregon, have all reviewed this report and concurred or offered no objection. The Bureau of the Budget offered no objection to its transmission to the Congress. It is recommended for authorization.

Senator BUSH. It is entirely flood control?

Colonel STARBIRD. Yes, sir. The floods occur in the city of Eugene about once every 3 years.

Senator BUSH. If there is no objection the committee will insert at this point a statement on the Amazon Creek project.

(The documents referred to are as follows:)

AMAZON CREEK, OREG.

(S. Doc. 131, 83d Cong.)

Location: Amazon Creek rises in west central Oregon, 6 miles south of Eugene, and flows 24 miles generally north to a junction with Long Tom River at a point 15 miles above its confluence with Willamette River.

Report authorized by: Senate Committee on Public Works, October 14, 1949.

Existing project: Channel improvement through Eugene, downstream to a diversion structure above Clear Lake and a diversion canal from that point to Fern Ridge Reservoir. Improvement of the channel below the diversion structure to Long Tom River with major drainage ditches or laterals tributory thereto.

Plan of recommended improvement: Enlarge channel through Eugene with about one mile having concrete lining and guard rail. Improve channel from Eugene to a diversion structure about 3 miles upstream from Clear Lake, and a diversion structure and diversion canal therefrom to Fern Ridge Reservoir.

Estimated cost:

July 1953 prices:	
Federal	$893,600
Non-Federal	339,090
Total	1,232,690

Local cooperation: Provide lands, easements, and rights-of-way, construct necessary bridges, and make relocations; hold and save United States free from damage; maintain and operate project; and contribute in cash 11.5 percent of the construction cost currently estimated at $56,400.

Project economics:

Annual charges:	
Federal	$31,530
Non-Federal	18,740
Total	50,270
Annual benefits:	
Flood control	66,500
Increased land use	30,700
Advance bridge replacement	1,300
Total	98,500
Benefit-cost ratio	1.96

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Remarks: The remaining work to be done under the recommended modified project is the completion of the enlarged channel through Eugene at an estimated construction cost of $490,000 of which $350,000 would be a Federal cost. The benefit-to-cost ratio for the remaining work is 1.26.

Senator BUSH. Are there any questions?

(No response.)

Senator BUSH. If not, we will proceed to the Tillamook Bay and Bar, Oreg.

TILLAMOOK BAY AND BAR, OREG.

Colonel ALLEN. Tillamook Bay is located on the Pacific coast in Oregon, about 47 miles south of the Columbia River. Tillamook Bay in the state of nature was separated from the ocean by Bayocean Peninsula, which formerly extended from Kincheloe Point to this area here.

The existing project for Tillamook Bay consists of a jetty 5,700 feet long and an 18-foot deep channel across the bar, and a channel into Garibaldi, which is shown in blue here. Other authorizations are shown in red, which have not been completed.

Over the past 15 years Bayocean Peninsula has been continually eroding. Up to the time it was breached in 1952 there was a question of the protection of private property and no hazard was involved to the navigation project in the bay. The continued erosion resulted in 1952 in a breach of Bayocean Peninsula, and at the present time this peninsula has been breached with an island here and a remnant of the former peninsula here, allowing the tide to ebb and flow from the Pacific Ocean into the bay.

This has a number of effects. On the navigation channel it has the effect of reducing the amount of water flowing in and out by reason of the tide here, and reducing the velocities which formerly contributed towards keeping that channel open. It has a bad effect on the oyster beds by permitting material to wash through and to lay on the oyster beds and eventually suffocate the oysters. It eventually will have an

effect on the bay channel back here, which is not a Federal project, but which will have a considerable effect on the lumber industries up at the headwaters of the Tillamook River.

So it has now become urgent that some corrective measures be taken in order to prevent a complete closure or loss of the Federal channel shown here.

The plan recommended by the Chief of Engineers at a Federal cost of $1,500,000 is to construct a dike from Bayocean Peninsula across the Pitcher Point in order to effectively seal this dike and close it and put the tidal prism back into the navigable Federal channel in here.

It will also correct the situation of the shoaling of the oyster beds, and the eventual shoaling of the Bay Channel.

Since there were some local benefits derived by such a structure, primarily a saving of maintenance in the Bay Channel, which would accrue to local interests, and a saving in the damage to the oyster beds, there is a cash contribution of $250,000 on the part of the local interests, which has been accepted by them, which would be added to the $1,500,000 of Federal contribution. In other words, local interests would provide lands, easements and rights-of-way.

This report was transmitted to the various agencies. The only comment which should be noted here is one from the Bureau of the Budget, which recommended that rather than incorporating a fixed cash amount to be contributed by local interests, that it be placed on a percentage basis. They recommend 15 percent, which is approximately the present percent of the local contribution. They recommend it on a percentage basis in order to keep pace with raising or lowering of the cost.

That feature, incidentally, is consistent with the action taken by the House committee, where local contributions have been incorporated as a part of the recommendations.

The benefit-cost ratio is 2.36 to 1.

Senator BUSH. The local interests have indicated the limit of what they will put up. They will not go but 15 percent.

Colonel ALLEN. They indicated at the time of the project document being prepared that that was as high as they could go at that time.

Senator BUSH. Are there any questions?

Senator HOLLAND. What about the tonnage of that port?

Colonel ALLEN. The tonnage in Tillamook—ocean-going tonnage, that is, tonnage which actually leaves Tillamook Bay in the period 1947 to 1951 averaged 78,500 tons annually. Considerable tonnage moves inside from the area in the nature of logs down to the Garibaldi area, amounting to some 414,000 tons.

Senator HOLLAND. That is not served by the Federal project?

Colonel ALLEN. No, sir. The only benefit of this structure to this amount of tonnage would be an effect on the Bay Channel.

Senator BUSH. Has that been noticeable yet?

Colonel ALLEN. Yes, sir. Particularly down in this area with the tide working in and out here it will eventually result in very severe shoaling conditions in this area, and a reduction of the channel dimensions.

Senator HOLLAND. Are the dikes that surround the whole area, local construction?

Colonel ALLEN. There are some local dikes down in here, for which no benefits were taken by reason of this particular project.

Senator KUCHEL. May I ask a question?

Senator BUSH. Yes.

Senator KUCHEL. Colonel, why don't we run head on into that erosion section of the Flood Control Act that you were discussing earlier in connection with this project? I mean, from a legal standpoint is there not beach erosion there?

Colonel ALLEN. There is beach erosion, but as I mentioned, Senator, up until the erosion took place on Bayocean it was a queston of protecting privately-owned shores, which under the law we could not contribute federally to.

Senator KUCHEL. The island in there is a privately owned island?

Colonel ALLEN. Yes, sir. It was all privately owned in here. In a state of nature it was completely closed down here and considerable development was built down here, which has been lost.

Senator HOLLAND. It is beautiful. I have been there and looked at it and it is really beautiful.

Senator KUCHEL. I wonder how you get away from the provision of the Flood Control Act? Is it not relevant to this project?

Senator HOLLAND. No. It has become a navigation problem now. It is not an erosion problem any more.

Senator KUCHEL. It developed because of erosion?

Senator HOLLAND. Yes, but the erosion program is a different program entirely from navigation and flood control. While they had an erosion program for public beaches in which they could have done something, they could not do anything there. Now it has become a navigation problem. If they had been able to foresee this was apt to happen it could have been a navigation problem then rather than an erosion one, but apparently they did not know the erosion was that serious. It must have been a storm or something that broke through.

Colonel ALLEN. Yes, sir. It has continued in the erosion for the past 15 years or more.

Senator KUCHEL. Then let me ask you this question: Suppose you were permitted under the law a number of years ago to have prevented the continuance of that erosion so that there would not have developed the navigation problem because there would not have developed that break where the ocean was coming in. Would that not have been in the public interest?

Colonel ALLEN. That was considered a number of years ago by the then Shore Protection Board, which looked into this problem and made certain recommendations for the protection of Bayocean Peninsula. But in view of the fact that it was privately owned property at that time it was not felt there was any Federal responsibility or interest in the problem.

Senator KUCHEL. So we have a situation where actually the statute worked to the detriment of the Federal Treasury, because I assume what you are now required to do encompasses an expenditure of a larger amount of money than it would have if you had been faced with an erosion problem?

Colonel ALLEN. The recommendations of the Shore Protection Board were rather expensive also at that time by reason of the fact that one of the recommendations was the series of groins and bulkheads down here in order to retain that and stand against the onslaughts of the Pacific Ocean. It would have had to be a very costly undertaking.

Senator KUCHEL. Would it have been in your judgment as costly or more so than what this project now contemplates?

Colonel ALLEN. I do not have the exact figures, but it was a very expensive project. I believe about $2 million.

Senator BUSH. Are there any other questions?

(No response.)

Senator BUSH. Thank you very much.

We will insert in the record a memorandum on Tillamook Bay and Bar, Oreg.

(The document referred to is as follows:)

TILLAMOOK BAY AND BAR, OREGON

(S. Doc. 128, 83d Cong.)

Location: On Pacific coast of Oregon 47 miles south of Columbia River. Bay separated from ocean by Bayocean Peninsula.

Report authorized by: Senate Public Works Committee resolution, June 20, 1952.

Existing project: Provides for 5,700-foot jetty on north side of entrance; 18-foot bar channel of practicable width; 18 by 200-foot channel from bay to Miami Cove; initial dredging of 12-foot basin and approach channel at Garbibaldi; 16 by 200-foot channel to 500-foot-wide basin at Hobsonville; and regulating works as required.

Plan of recommended improvement: Close breach in Bayocean Peninsula by constructing sand dike 1.4 miles long on alinement extending between Pitcher Point and town of Bayocean.

Estimated cost:

Report (December 1953):	
Federal	$1,500,000
Non-Federal	275,000
Total	1,775,000

Local cooperation: Furnish lands, easements and rights-of-way; hold and save the United States free from damages including damages to oyster beds and other shellfish grounds; contribute in cash 15 percent, but not to exceed $250,000, of the cost of construction.

Project economics:

	Report (December 1953)
Annual charges:	
Interest and amortization	$62,600
Maintenance	25,000
Total	87,600
Annual benefits:	
Benefit on Federal channel	116,500
Saving on bay channel maintenance	67,500
Prevention of damage to oyster beds	22,450
Total	206,450
Benefit-cost ratio	2.36

Comments of the Bureau of the Budget: No objection to transmission of report to Congress. However, local cash contribution of 15 percent should not be limited to $250,000.

Remarks: Local interests have indicated that $250,000 is the maximum cash contribution they are able to make.

Senator BUSH. We will now proceed to the Sitka Harbor item in Alaska.

HARBORS AND RIVERS IN ALASKA

Senator BUSH. We have a statement here from the Delegate from Alaska, Mr. Bartlett, which without objection can go in the record at this point.

(The document referred to is as follows:)

STATEMENT OF E. L. BARTLETT, DELEGATE IN CONGRESS FROM ALASKA

Mr. Chairman, as you know, H. R. 9859 as it passed the House includes authorization for 2 navigation projects in Alaska, at Valdez and Seward, and 1 flood-control project at Gold Creek, Juneau, Alaska.

I desire to endorse not only these 3 projects which have received House approval but would also like to urge the inclusion of 4 additional Alaska projects which were sent to the Hill by the Department of the Army after the appropriate subcommittees of the House Public Works Committee had completed hearings on the omnibus bill. These reports are included in House Document 414 on Harbors and Rivers in Alaska and House Document 465 on Kodiak Harbor.

Two of the projects approved in H. R. 9859 as it was sent to the Senate would authorize improved protection for existing small-boat harbors at Valdez and Seward. The Valdez project would provide for construction of a rock and gravel breakwater and a pile breakwater at an estimated cost of $116,600, and the work at Seward would raise the south breakwater and construct a pile breakwater at an estimated cost of $81,200. The authorization proposed in the measure for Gold Creek would permit flood-control work there at an estimated cost of $380,000. I have lived in Juneau over a period of several years and along with the other residents of Alaska's capital city have seen floods in Gold Creek which have done a lot of damage to the property there. The Army engineers from time to time have performed temporary emergency repairs, but since there is a continuing threat it would seem that the better part of wisdom would be to provide a permanent remedy.

The 2 navigation projects mentioned above, those for Valdez and Seward, would, along with the 4 Alaska projects not considered by the House, go a long, long way to bolster the economy of not only the communities which would be directly affected, but would be of immeasurable value to Alaska itself. The additional projects which I sincerely hope will be approved by your committee are:

1. Dredging of a 12-acre area and 2 rock breakwaters at Kodiak at an estimated cost of $1,685,000;

2. Dredging of a small-boat basin for the United States Forest Service at Sitka at an estimated cost of $32,500;

3. Dredging of a channel at Dry Pass at an estimated cost of $1,113,600;

4. Dredging of a channel at Neva Strait through Whitestone Narrows at an estimated cost of $176,000.

The importance of small boats in Alaska's economy cannot be overstressed, and projects which afford anchorage or passage for those small boats are vital to the economy of the coastal towns, which is founded mainly on fishing and fish processing. In my estimation the costs involved are truly minor compared with the benefits which would accrue.

Members of this committee visited Alaska last year, and there is no need to state here in any great detail the importance of these rivers and harbors projects in the Territory. The Congress in considering the 1955 fiscal year appropriations for the Department of the Army approved $109,900 for channel dredging at Kodiak. No doubt the Senate group also saw the need for a small-boat harbor at Kodiak, one of the main fishing centers in Alaska. A small-boat basin is badly needed at Kodiak, which lies adjacent to waters filled with crab, salmon, and other resources of the sea.

The dredging projects for Dry Pass and Neva Strait would afford passage for small boats and other vessels and would be beneficial not only in connection with the fishing industry but would provide passage for carriage of timber and timber products, especially through Dry Pass.

The Congress some years ago authorized a small-boat basin for Sitka for which funds have never been appropriated. The project for the United States Forest Service basin at Sitka at the estimated cost of $32,500 is I believe worthy of consideration as it is my understanding the Army engineers estimate that if the two projects could be coordinated the costs for each could be substantially reduced.

I respectfully urge that all seven Alaska projects be approved by the committee.

Senator BUSH. You may proceed.

General ITSCHNER. We contemplated that these Alaska projects would be heard tomorrow, so we are not as well prepared as we might be. However, we will give you the salient facts and the benefit-cost ratio, and with your permission we would like the authority to submit something for the record in addition in each case.

Senator BUSH. Will you proceed then, please, General?

General ITSCHNER. Yes, sir.

If I may start, without any preparation, I would like to say that the first project is Sitka Harbor, which is a harbor in southeastern Alaska on the northeastern shore of Sitka Sound. It is important as a port for fishing vessels. It is the westernmost deep-sea port in southeastern Alaska and a port of call for larger vessels traveling between Seattle and Alaska. It was the capital of Alaska up to the time Juneau was made the capital and it is quite an important port from a fishing and a forestry standpoint.

Colonel Allen, do you have the information on this particular project?

Colonel ALLEN. Yes, sir. It would modify the existing project at Sitka to provide for the dredging of this United States Forest Service basin 10 feet deep by 130 by 270. The estimated cost of the proposed project at Sitka as of September 1953 was $41,500, with a benefit-cost ratio of 1.09.

Senator BUSH. What is that basin used for there? Ten feet deep does not sound very deep.

Senator HOLLAND. They do not have big shipping in there, but it is growing all the time.

Colonel ALLEN. It is primarily for the fishing facilities in the port of Sitka.

Senator HOLLAND. They have salmon fisheries there.

Senator BUSH. The whole project involved here is that little basin there?

Colonel ALLEN. That is correct.

Senator BUSH. What is the cost of it?

Colonel ALLEN. $41,500.

Senator BUSH. Is there any question?

(No response.)

Senator BUSH. If not, we will proceed to the next one, which is the Dry Pass Channel in Alaska.

Senator HOLLAND. Mr. Chairman.

Senator BUSH. The Senator from Florida.

Senator HOLLAND. Might I ask a question on this? I noticed this is an improvement and deepening of the United States Forest Service basin. What do they have to say about the need for it?

Colonel ALLEN. I have not gone into the report, not expecting it to come up. I will have to ask your indulgence to check the report on that.

Senator HOLLAND. It is not a publicly used basin, but one used for the Forest Service itself, their offices and docks, which are over there on this basin.

General ITSCHNER. That is correct. It is primarily used by the Forest Service. The Forest Service has a great interest in this area because of the construction of pulp mills in Alaska which are going up in the area.

Also, there is a lumber mill at Juneau.

Senator HOLLAND. This area is between Ketchikan and Juneau, and is in the heavy spruce area that we flew over.

General ITSCHNER. That is correct. Spruce and hemlock. Yes, sir.

Senator HOLLAND. Where the wood will be taken entirely off of national-forest lands.

General ITSCHNER. That is correct. The project at Dry Pass is requested in order to provide better navigation conditions for the log rafts that must use this pass to reach the new pulp mill in Ketchikan. The document states that the deep Davis rafts coming into common use by the logging industry require an improved navigation feature. The improvement of the pulp industry in southeastern Alaska indicates a greatly increased use of Dry Pass if a channel of 12 feet in depth is provided. The potential benefits to the general economy that will result from such improvements are substantially in excess of the estimated annual costs. Dry Pass has a benefit-cost ratio of 1.25. It has a total Federal cost of $1,419,800.

Senator BUSH. Would you indicate on the map where the new project is supposed to be?

General ITSCHNER. The modification would provide for deepening of what are now natural depths to 12 feet and 70 feet wide in the area shown. There are natural depths in excess of 12 feet in the remainder of the waterway.

Senator UPTON. What is the need for the deepening of the channel?

Senator BUSH. For the tugboats towing the rafts.

General ITSCHNER. Yes, sir; especially in times of low tide, when tidal currents are very great, making navigation difficult.

Senator BUSH. Shall we proceed with the next item, which is the Neva Strait item?

General ITSCHNER. Would you mind if we took up the Kodiak project next?

Senator BUSH. Not at all. The Kodiak project.

General ITSCHNER. The next project is Kodiak small-boat harbor, which is a port on Kodiak Island in the central portion of Alaska off the Gulf of Alaska. It is the port for an important naval airbase, which is a few miles away. At the present time and for many years it has been available for oceangoing vessels of moderate draft through an existing channel.

The proposed project and the project on which we are appearing before you today is a small-boat basin which is proposed be constructed off the existing and authorized project. The proposed improvement would provide a small-boat basin of about 12 acres in area dredged to depths of 12 and 8 feet and protected by 2 breakwaters about 1,250 and 780 feet long.

The total cost of this project would be $1,883,600 of which $198,600 would be non-Federal.

The benefit-cost ratio would be 1.37.

The purpose of the harbor would be to shelter the large number of fishing vessels which base out of Kodiak to take advantage of the excellent salmon fishing in the general area. In the year 1950 salmon valued at $11,600,000 were taken through the port of Kodiak in the 21 canneries that canned salmon in that vicinity.

In addition to salmon there are certain other valuable fisheries in the area, including razor clams, king crab and halibut.

That is all I have on this project.

Senator BUSH. Thank you.

Are there any questions?

(No response.)

Senator BUSH. If not, we will file in the record the statement on the project.

(The statement referred to is as follows:)

KODIAK HARBOR, ALASKA

(H. Doc. 465, 83d Cong.)

Location: Kodiak Harbor is on the northeastern coast of Kodiak Island in the Gulf of Alaska at the town of Kodiak.

Report authorized by: Rivers and Harbors Act, March 2, 1945.

Existing project: Provides for a channel 22 feet deep and 200 feet wide in North Channel. Partial construction was accomplished under a United States Navy contract in 1942.

Plan of recommended improvement: Modification of existing project to provide a small-boat basin of about 12 acres in area dredged to depths of 12 and 8 feet and protected by 2 rock breakwaters about 1,250 and 780 feet long.

Estimated cost:

September 1953 prices:	
Federal	$1,685,000
Non-Federal	198,000
Total	1,883,600

Local cooperation: Furnish lands, easements, and rights-of-way, including quarry rights; perform maintenance dredging; construct, maintain, and operate mooring facilities and public landing; and hold and save United States free from damages.

Project economics:

Annual charges:	
Federal:	
Interest and amortization	$59,600
Maintenance	2,000
Non-Federal	17,700
Total	79,300
Annual benefits:	
Storm damage prevented	23,000
Savings in mooring and protecting boats	52,000
Increased net value of fish	33,350
Total	108,350
Benefit-cost ratio	1.37

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Senator BUSH. We will now proceed to the next item of Neva Strait.

Colonel ALLEN. Neva Strait forms a part of the protecting water passage which connects Sitka with the inside passage of southeastern Alaska. There are natural depths throughout this passage here in excess of the 24 feet that local interests consider is necessary for safe navigation in this area. There are numerous shoals and rock ledges in Neva Strait, which make navigation in that area very hazardous. They require the removal of these rock ledges to an adequate width and depth in order to accommodate all classes of vessels up to a depth of 24 feet.

The project recommended for Neva Strait is a channel 24 feet deep and 200 feet wide through the narrows as shown on this large map here. There is no local contribution to this project. The current cost as of September 1953 is $224,400, with a benefit-cost ratio of 2.11 to 1.

Senator BUSH. What is the length of the proposed improvement? Does it show there?

Colonel ALLEN. No, sir. I do not have the length of the proposed improvement.

Senator BUSH. What is the amount involved?

Colonel ALLEN. $224,400.

General ITSCHNER. It is a very short distance, about three-fourths of a mile, as indicated on that chart.

Senator HOLLAND. It goes through from the outer passage to the inner passage.

General ITSCHNER. It goes between two islands which serve to protect the inner passage.

Senator BUSH. Is there any question?

(No response.)

Senator BUSH. If not, I think that concludes our morning business.

The document on the harbors and rivers in Alaska will be included in the record.

(The document referred to is as follows:)

HARBORS AND RIVERS IN ALASKA

(H. Doc. 414, 83d Cong.)

Location: Area concerned is in the western portion of southeastern Alaska. This section is known as the Panhandle or Inside Passage area.

Report authorized by: House Rivers and Harbors Committee resolution, October 30, 1945; Rivers and Harbors Act, March 2, 1945; and Flood Control Act, June 30, 1948.

Existing project: Sitka, provides for an entrance channel 22 feet deep and 150 feet wide, and a small-boat harbor of about 13 acres and 10 feet deep in Crescent Bay. Small-boat harbor has not been started. Dry Pass provides for a channel 60 feet wide and 6 feet deep between El Capitan Passage and Shakan Strait. Completed in 1937. Neva Strait, no Federal project.

Plan of recommended improvement: Sitka, modification of existing project to provide for dredging the United States Forest Service basin 10 feet deep, 130 feet wide and 270 feet long, and its approach 10 feet deep. Dry Pass, modification of existing project to provide for a channel 12 feet deep and 70 feet wide. Neva Strait, provide a channel 24 feet deep and 200 feet wide through Whitestone Narrows.

Estimated cost (all Federal):

	OCE report (1949)	Current (September 1963)
Sitka	$32,500	$41,500
Dry Pass	1,113,600	1,419,800
Neva Strait	176,000	224,400

Local cooperation: Sitka, hold and save United States free from damages. Dry Pass and Neva Strait, none required.

Project economics:

	Sitka		Dry Pass		Neva Strait	
	Report	Current	Report	Current	Report	Current
Annual charges:						
Interest and amortization	$1,790	$2,070	$52,120	$61,700	$7,200	$8,320
Maintenance	1,100	1,410	1,850	2,360	2,000	2,550
Total	2,890	3,480	53,970	64,060	9,200	10,870
Annual benefits:						
Prevention of damage or loss	3,000	3,800	17,700	22,550		
Transportation savings			44,920	57,270	10,000	12,800
Increased fish catch					7,100	10,170
Total	3,000	3,800	62,620	79,820	17,100	22,970
Benefit-cost ratio	1.04	1.09	1.16	1.25	1.86	2.11

Comments of the Bureau of the Budget: No objection to the submission of the report to Congress.

Senator BUSH. Without objection, the committee will stand in recess until tomorrow morning at 9:30.

(Whereupon, at 11:45 a. m. the hearing was adjourned until 9:30 a. m. the following day, Friday, July 23, 1954.)

RIVERS AND HARBORS-FLOOD CONTROL 1954

FRIDAY, JULY 23, 1954

UNITED STATES SENATE,
COMMITTEE ON PUBLIC WORKS,
SUBCOMMITTEE ON FLOOD CONTROL
RIVERS AND HARBORS,
Washington, D. C.

The subcommittee met, pursuant to call, at 9:35 a. m., in room 412, Senate Office Building, Hon. Prescott Bush (chairman of the subcommittee) presiding.

Present: Senators Edward Martin (chairman of the full committee), Prescott Bush, Francis Case, Dennis Chavez, Spessard L. Holland, John C. Stennis, and Albert Gore.

Also present: Charles N. Kapnic, chief clerk; Eloise Porter, assistant clerk; Ellsworth W. Bassett and Theo W. Sneed, technical staff members.

Senator BUSH. The meeting will please be in order. We will first hear from Senator Cordon.

STATEMENT OF HON. GUY CORDON, A UNITED STATES SENATOR FROM THE STATE OF OREGON

Senator CORDON. Mr. Chairman, I am appearing before you today to give my full support to the project recommended by the Chief of Engineers and the Secretary of the Army for Amazon Creek, Oreg. The recommendation you are now considering is not for a new project but, rather, for the modification of a project already underway. It is a relatively small modification. It is one affecting a section of channel in the heart of the city of Eugene—a section which is overflowing on the average of once each 3 years and which has done very heavy damage to this rapidly growing 40,000-person community.

By the Flood Control Acts of 1946 and 1950, a plan was approved to give flood relief to the city of Eugene and to the extensive agricultural lands along the 15-mile reach of Amazon Creek below the city. A portion of that plan contemplated the improvement of the downstream channel and the construction of a diversion works. Another portion, the most vital part, was for channel improvement along a 5-mile reach of the creek coursing the heart of the city of Eugene.

The presently authorized plan has a current estimated Federal cost of $1,038,000.

Since 1951 there has been certain developments which necessitate a modification of the authorized plan. These developments dictate that that modification should be given immediately. In the first place, local interests have undertaken a large portion of the work on

their own initiative and have indicated that certain additional portions will be accomplished by them if ultimately to be built.

Secondly, some $600,000 has been appropriated by the Congress to date and the larger portion of this appropriation has been expended to accomplish all of the presently required work except for that of improving some 5,800 feet of channel through Eugene. Improvement of that 5,800 feet is dependent upon authorization of the present modification.

Thirdly, further study has indicated that the presently authorized channel through Eugene should be modified from one which will protect against the 50-year flood to one which will protect against the 100-year flood.

The modification then that you are asked now to authorize would permit a change in the design of the 5,800 feet of channel I have already mentioned. The total cost of construction of that section of channel will approximate $350,000, but local interests will be expected to contribute in cash toward that construction $50,000. In addition, of course, they will be expected to furnish all necessary lands, rights-of-way, and relocations and to maintain the channel upon completion. When this modification is authorized and the section completed, the project will not have cost the Federal Government $1,038,000, as would the presently authorized project, but, rather, $894,000.

In summary, the modification recommended affects the most critical part of a Federal project already two-thirds complete. Completion of the remaining one-third is dependent upon approval of the modification. The modification will involve a slightly higher Federal cost for the section in question but because of work of local interests the overall Federal cost of the project will be decreased. Certainly, therefore, this modification deserves early approval.

Mr. Chairman, I appear before you today also in support of the improvements for navigation recommended by the Chief of Engineers and the Secretary of the Army for Bay Ocean Peninsula, in the Tillamook Bay area, Oregon. The recommendation under consideration is a new project for the closure of the breach in the Bay Ocean Peninsula.

Tillamook Bay is about 50 miles south of the mouth of the Columbia River. Formerly the bay was protected by a natural barrier known as Bay Ocean Peninsula and access to the Pacific Ocean was through a navigation channel around the north end of the peninsula. During November 1952, unusually high tides in combination with severe storms, breached about a mile of the peninsula near the mainland and now the bay is affected seriously by way of the tidal action.

The Federal Government has improved the Tillamook Bay area by constructing a jetty on the north side of the entrance of the bay and dredging channels in the area.

Construction of this recommended project is very important to the economy of the area for a number of reasons, but principally to maintain the integrity of the existing navigation facilities and for protection of the oyster beds.

The principal industry of the area is logging and lumber activities. The logs are rafted to the mills and the lumber and wood products moved by water transportation. Shoaling of the channels since the breach of the peninsula is seriously affecting the towing activities.

The oyster industry in the bay has been valued at about $2,500,000 and the beds were comprised of 3,000 acres. Since the breach in Bay

Ocean Peninsula, about 1,000 acres have been destroyed by sand and gravel swept in the bay by tide and wave action.

I am informed that the local people concerned are of the opinion that the erosion of the peninsula is due largely to the construction of the north jetty of the navigation project. In fact, there is considerable evidence to substantiate this opinion. Since construction of the jetty a large quantity of sand has been stopped on its north side. Also, erosion of the peninsula has been continuous since completion of the jetty.

The project which you are asked to authorize would provide the construction of a sand dike to close the breach in Bay Ocean Peninsula at a cost to the Federal Government of $1,500,000 for construction and $25,000 for annual maintenance provided the local interests furnish the necessary rights-of-way and contribute in cash a sum not to exceed $250,000.

In summary I feel that the benefits that would be received from construction of the recommended improvements would far exceed the cost. I urge early approval of the project as a delay will result in further damage to the oyster beds, losses to navigation and would appreciably increase the cost of the work to the Federal Government.

STATEMENT OF HON. MARGARET CHASE SMITH, UNITED STATES SENATOR FROM MAINE

Senator SMITH. Mr. Chairman, the omnibus bill as reported to the House contains two projects of great importance to the State of Maine. I refer to the Lubec Channel, and Portsmouth Harbor and Piscataqua River. I sincerely hope that these projects are retained in the bill.

I have been requested by my constituents to bring to the attention of the committee the need for preliminary examinations and surveys at several localities in my State. These are meritorious projects, and I believe that they should be investigated by the Corps of Engineers. A description of these projects is as follows:

WELLS BEACH HARBOR, MAINE

The Wells Harbor Committee has appealed to me for investigation of possibility and feasibility of establishing a harbor between Wells Beach and Drakes Island, so-called, both in said town of Wells, for the purpose of promoting commercial fishing for a home fleet within the territory; create harbor facilities for visiting boats and vessels and fleets passing up and down the coast of Wells; to generally improve the waterfront; to reclaim now valueless marshlands; improve an already existing waterway; to bring new and added business to Wells; and to generally benefit the public at large who come to Maine for business reasons and on vacation.

I request that full consideration be given to inclusion of this project in the Senate omnibus bill.

EASTERN RIVER, ORLAND, MAINE

Officials of Orland, Maine, are appealing to me for dredging of the Eastern River, from the Thoroughfare, so-called, to the approach of the St. Regis Dam, stating the following reasons:

1. The town is taking fish (alewives), for the purpose of paying for a new schoolhouse. The fish are dropping off because of the river filling with mud.

2. Boats are not able to get up the river except at high water.

3. There are a few salmon in the river now but there would be more if it were not for difficulty at low water.

4. In an emergency or otherwise, they would like to be able to land planes on the river.

5. Weir fishermen cannot move their fish until the water rises.

6. The channel is clogged, therefore they have a poor quality of fish for the market.

7. They have prospects of a fish-packing company locating a processing plant here and they would need to use boats on the river.

I request that full consideration be given to inclusion of this project in the Senate omnibus bill.

SOUTHWEST HARBOR, MAINE

Citizens of Southwest Harbor have appealed to me during the past year for dredging of this harbor. They tell me it is badly needed to provide more space for navigation and anchorage for steadily increasing business, especially for the large draggers and carriers coming into the harbor. During the past 15 years, business in this harbor has increased as much as 300 percent. Some of the businesses located there are as follows:

1. Largest repair yard between Rockland and Eastport.

2. Largest marine wholesale-retail outlet between Portland and Eastport.

3. Largest builder of auxiliary yachts in eastern United States.

4. Largest artificial ice plant in Maine.

5. Sardine factory which ranks with top three packers in Maine.

The United States Coast Guard and air crash rescue units are stationed in this harbor.

It is a harbor of refuge as stated on page 185 of the United States Coast Pilot Book.

Mr. Chairman, I urge that this project be included in the Senate omnibus bill, and that additional data from the Southwest Harbor Chamber of Commerce be included in the record.

(The information referred to is as follows:)

SOUTHWEST HARBOR DREDGING PROJECT

The Southwest Harbor Chamber of Commerce and the town of Southwest Harbor presents the following data:

To keep in step with our increasing water business we must provide more harbor space especially for the large draggers and carriers which frequent our harbor as well as the visiting yachtsmen who arrive and find the suitable berths taken or just not available. During the past 15 years our business has increased tremendously perhaps by as much as 300 percent.

Our local lobster fleet is concentrated naturally in the protected area with adequate water. Since this space is small it makes it very difficult for the larger craft to navigate—they do not have the necessary turning space. One of the enclosed photos will give good indications of this.

H. R. Beal. Fish and lobsters. Many large draggers and carriers do business here as well as the lobster men from Southwest Harbor and the surrounding islands.

Stanley Fisheries. Fish and lobsters. Same type of business as Beal.

Stanley's artificial ice plant. The large draggers and visiting yachtsmen secure ice here, and trucks carry some out. Ten thousand pounds per day capacity.

C. H. Rich. Lobster dealer.

Hooks Lobster Trucking. Has four trucks carrying lobsters out year round.

United States Coast Guard. Several rescue boats including tug stationed here. It is also buoy station with frequent visits by tenders.

United States mail boat. Delivers to surrounding islands: Cranberry, Islesford, and Sutton.

Addison Packing Co. Large factory which has 320,000 cases of sardines in past 2 years.

Henry Hinckley Co. Largest builder of auxiliary yachts in Eastern United States. Also has hardware and supplies for visiting yachtsmen.

Southwest Boat Corp. Largest repair yard between Canadian line and Rockland, Maine. Also builds large vessels.

Manset Marine Supply. Largest marine hardware outfit between Canadian line and Portland, Maine.

Rich & Grindle. Builder of smaller boats, 25 to 40 feet.

Beal & Bunker. Builder of smaller boats, 25 to 40 feet.

Bouchard Boatshop. Builder of smaller boats, 25 to 40 feet.

United States Air Force. Has crash unit stationed here, one 85-foot boat and one 42-foot boat.

The Boat House. Engages in sale and rental for all types of boats.

State of Maine. Has fish and game warden stationed here, plus boat.

Islesford Ferry. Runs June 15 to September 15.

O. E. Harper. Has fleet of trucks to transport fish and lobsters out.

These men own and operate lobster boats out of Southwest Harbor:

William Spurling	Raymond Reed	Emerson Spurling
Sheldon Spurling	Lowell Noyes	Frank Faulkingham, Jr.
Merrill Stanley	George Noyes	Elmer Beal
Chester Stanley	Warren Rice	Ralph Phippen
Leon Pierce	Lyle Newman	Everett Closson
Lyford Rich	Paul Faulkingham	Charles Rich
Don Sullivan	Carl Johnson	Harold Soukup
Leon Pierce	Frank Goodwin	Chester Gott
Cliff Stanley	Oscar Krantz	George Dolliver
Shirley Phippen	Richard Bulger	Alton Urquhart
Everett Parker	Maurice Beal	George Jellison
Lawrence Newman	Maurice Norwood	Andrew Parker
Cliff Robbinso	Henry Linscott	Perley Stanley

These men own and operate draggers and carriers out of this harbor:

Name of vessel	Owner-operator	Size (feet)	Type
Lone Wolf	H. R. Beal	46	Dragger and seiner.
Elva L	do	43	Do.
Ida Mae	Addison Package	64	Carrier.
Surfman	do	56	Do.
Kingfisher	do	74	Do.
	Natalie and Dennis Damon	44	Dragger.
	Fanny and Ethel L. Wedge	46	Do.
Margaret	Joe Reynolds	42	Do.
Frances K	Arvid Krantz	42	Do.
IA551	John Reynolds	42	Do.
	Paul Renalds	40	Do.
Eva Grace	Addison Package	60	Carrier.
Rhode Island	William Howell	85	Dragger.
Joyce Marie	Addison Package	56	Do.
Rutheolyn	Leslie Morrill	37	Do.
Glowmate	Gunnar Christiansen	40	Do.
Little Growler	H. R. Beal	26	Sardine spotter.
Hornet	do	26	Seiner.
	do	40	Seiner and dragger.
	Merle Bunker	40	Do.
Little Bill	Earl Boomer	36	Seiner.
	Peter Benson	40	Do.

Draggers 6- to 12-foot draft which have traded here last 2 years. The boats have sold fish to H. R. Beal and Stanley Fisheries:

John L. Stanley	Lucy Scala	Jean D'Arc
Andarte	Norta Dame	Mabel Mae
Three Sisters	Thedis	Dorothy and Betty
Jackie B.	Cigar Joe	B. Estelle Burke
Mary Curtis	Doris F. Amiro	Emily Brown
Bonaventure	Eleanor	Rhode Island
Mary Rose	Estrela	Phillip and Grace
Baby Rose	Florence and Lee	Sylvester
Manuel F. Roderick	Golden Eagle	Yankee
Madonna	Hazel B.	Santina D.
Amerault	King Fisher	Salvatore and Grace
Holy Family	Alice M. Doughty	Marietta and Nanc·
Holy Cross	Eleanor and Gene	Althea
Ohio	Helen Mae II	Cora-Cora
Hilda Garston	Little Growler	Carlo and Vince
Brookline	Dorothy and Ethel II	Louise G.
Queen of Peace	Marie H.	Varna G.
Ocean Spray	Schoodic	John Noyle
Breeze	Aloha	Thomas Carroll
Billow	Frances and Alice	Aroho
Braker	Geraldine and Phyllis	Thersa R.
Ellen B.	Uncle Guy	Evzone
Flo	Thomas D.	Rosalie

Summer boats owned in Southwest Harbor:

E. S. Burke, Jr. (2)	Harold Thomas	Lennox Sargent
Dr. Buell (2)	Palmer Putnam	Percy Zeigler
Marshall Dana	Henry Wass	Lloyd Yates
A. B. Homer (3)	Milo Wilder	Carroll Tyson
John Tyssowski (2)	Henry Guthrie	William Johnston
C. T. Thompson	Reverend Foote	Admiral Ellsberg
C. I. Thompson	Clarence Hall	Steve Spurling
Henry Hinckley (2)	Martha Munson	George Robbins
James Willis (8)	B. B. Hinckley, Jr.	Leslie Phalen
Boyd Spahr (2)	Mrs. Roger Underwood	Richard Rowse
Frank Roberts	David Longmaid	Roger Rich
Dr. Millstein	George Lauriat	Dr. W. E. Clark
Ellen McInnes	R. G. Wellington	Stanton Eustis

All types of boats have increased. We have more sardine carriers laying here than any other port in Maine because of our geographic location—the halfway point. Large draggers stop here because of our fish buyers, large iceplant, large marine hardware store, splendid repair facilities, it is a harbor of refuge even though congested and because of its central location.

Our recreational boats have increased as our summer population has grown. We have many visitors because of our facilities as previously mentioned.

Lobster fishermen and boats have increased in number because of not only our facilities but because our town is an excellent place to live—good schools, modern stores, town water, sewerage, etc.

Two yacht clubs have already made arrangements to visit here this summer—the Boston and the Eastern.

Our channel hardly exists; it is very small in length. We have private wharves owned by H. R. Beal, Stanley Fisheries, Henry Hinckley Co., Manset Marine Supply, Addison Packing Co., the Boat House, the Southwest Boat Corp., all of whom are in business and cater to the public.

Our town dock is used by the surrounding islands. Cranberry Islesford, Sutton, and Greenings, because 90 percent of their business is done in the town of Southwest Harbor. The mail boat and the Islesford Ferry also use the landing as well as the island citizens in general. We are in the process of doubling the size of the town dock now.

Refer to above for yards and supplies. We have the best for such a small town or even a large town with few exceptions.

Moorings by visiting boats, pleasure and fishing, have to be made for the most part at some dock.

The nearest other refuge with adequate facilities such as we have would be Rockland.

Our private docking has been put to great use and has been well kept up.

For the past 20 years our harbor business has increased steadily. We feel that it will continue. A good illustration is the fact that on Mount Desert Island our town was the only one which gained in population from 1940 to 1950, a gain of approximately 25 percent. We made the largest gain in the period 1930–40.

Going back you can readily see what splendid facilities we have for boat people of all sorts. We feel that they will continue to frequent the place with the most accommodations.

But to grow we have to have room and we have pretty nearly outgrown our working space. We need more harbor space yet what we have is shoaling up.

We have reason to believe that the present soundings are not accurate and had hoped to have 1953 facts on this to send in with the report. However, they will be sent along at a later date.

Several pictures are enclosed which will give you good indication of type of fishing craft which frequents our harbor—both summer and winter. One of them shows how close lobster boats anchor. More pictures will be sent along within the coming week.

We haven't asked for breakwater because of the terrific expense involved. However, we would appreciate your doing something about the area around our town dock and Manset anchorage if this requested operation is carried out.

We have not listed the visiting carriers but since it is the largest lay-up for same we think that you will realize that we have a great many. Pictures will illustrate point about carriers.

Same for visiting yachtsmen.

(Photos and newspapers retained in files of the committee.)

Senator BUSH. May I say to the committee out of courtesy to Senator Stennis we will next take up the Pascagoula River, Miss., which is on the agenda. I will ask the Senator to make any remarks he cares to.

PASCAGOULA RIVER, MISS.

STATEMENT OF HON. JOHN C. STENNIS, A UNITED STATES SENATOR FROM THE STATE OF MISSISSIPPI

Senator STENNIS. Mr. Chairman, I certainly thank you for taking up this small project, particularly at this time, because other matters are pushing me. I have no prepared statement on this, Mr. Chairman. I am depending upon the proof from the United States Army engineers and also Congressman Colmer is coming over. But it is a highly important project, although not a large project. It is more of a modification and extension of a project than anything else, being a channel into a harbor.

With the expression of my very great interest, and also as to the emergency nature of it, which I will explain later, I yield now to the proof of the United States Army engineers.

STATEMENTS OF BRIG. GEN. E. C. ITSCHNER, COL. ALFRED D STARBIRD, COL. WILLIAM WHIPPLE, AND COL. J. U. ALLEN, ALL FROM CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY

Colonel ALLEN. We have, Mr. Chairman, only a small map which, however, may assist in the discussion.

Senator BUSH. Will you explain the project, Colonel?

Colonel ALLEN. The existing project at Pascagoula is for a 25 by 300-foot bar channel from the Gulf of Mexico and for a 22-foot by 225-foot channel up to the Louisville & Nashville bridge at Pascagoula. There is no report before the committee to modify this project. There is a directed review report to consider the desirability and

economic feasibility of increasing the project depth to 30 feet with a width of 225 feet, with a 35-foot depth over the bar. That report is in the district and will be completed within from 4 to 6 months.

Commerce in Pascagoula in 1952 was about 316,000 tons. The cost of this project—and I would like to point out that these are very rough estimates in view of the fact that there is no final report available—the cost of this project will be approximately $877,000 to deepen the channel to its 30-foot depth and maintain the present project width from the Gulf of Mexico to the Louisville & Nashville bridge.

Senator BUSH. What was that estimate?

Colonel ALLEN. $877,000. It is not possible at this time to determine whether or not this study will be a favorable or unfavorable study. There has been information given to the field which leads the field to believe that an oil company has plans to construct a refinery in the vicinity of Pascagoula, which would in a period of 3 to 4 years develop approximately 900,000 tons of tonnage. There is no further information available to us with respect to the intent of that oil company and their immediate desire to proceed.

There is also information that the Aluminum Co. of America may make use of an area in the vicinity of Pascagoula for the outside storage of materials. Again no definite information is available with respect to the tonnage that might be developed as a result of this improvement, nor as to when the need for this deepened channel for the Aluminum Co. may develop.

There is some information that a gypsum plant may be constructed. It has demonstrated an interest in the construction of a facility in this area. Again nothing firm is available on which to base any anticipated tonnage, nor anything firm to develop when such a depth will be required for this plant.

That is the extent of the information we now have on this project, Mr. Chairman.

Senator BUSH. Thank you very much, Colonel.

Senator STENNIS. At that point I would like to say this refinery the colonel mentioned is such that the local people there personally are going to spend $2 million of their own money for a special channel leading down to this public channel. This refinery locating there is dependent in part upon these improvements.

Mississippi is the second largest oil producing State east of the Mississippi River, and the sixth largest in the Nation. Still we have virtually no refineries. It is pumped out to Louisiana or Alabama for refining purposes. This is our chance to get a sizable refinery within the State.

Of course, it will greatly benefit the economy. These people are going to pay for this auxiliary channel leading down to the public one, but we need this public channel to go along with it.

Congressman Colmer is the Congressman in whose district this lies, and in fact it is his home area. If the chairman please, I would like to have the Congressman make a statement here and we will supplement this further by documentary proof later.

Senator BUSH. Congressman Colmer.

STATEMENT OF HON. WILLIAM M. COLMER, MEMBER OF CONGRESS FROM THE SIXTH CONGRESSIONAL DISTRICT OF MISSISSIPPI

Mr. COLMER. Mr. Chairman and members of the committee, we are very much interested in this project. I assume that the testimony so far has reflected the fact that Pascagoula and the port of Pascagoula is a sizable port; that the Ingalls Shipbuilding Corp. is located at Pascagoula; that it has made a great contribution and is currently making a substantial contribution to the defense effort.

There have been several hundred defense ships constructed in this yard. A substantial number of the Mariner class of ships of the merchant marine have been constructed there. There are presently underway two large icebreakers, being built for the Government to be used in the Arctic Circle. These ships will not be able to go to sea from the port of Pascagoula and from the yard there now without some artificial method of floating them, because there is not sufficient water there to take them out, due to siltation.

The yard, I might add, has built—I think I am correct about this—about half of the ships that have been built since World War II of the class I have just been discussing, that is, the merchant marine class. They are now bidding on other ships.

In addition to that plant there is a large pulp mill and there are a number of fishmeal factories and two other smaller shipyards and other industries, including the Glycol plant, which contributes to the manufacture of jet fuel.

As Senator Stennis has just pointed out, we think it is very important and very economical in the long run to have this refinery located at the point that has been indicated and then for Jackson County, in which Pascagoula is located, to dredge its own channel at a cost of some $2 million in order to tie in to the proposed channel to serve the ammunition depot, which is just on the Alabama-Mississippi line.

In that connection I should like to call the attention of the committee to the fact that we have a deep-water channel at Mobile, Ala., which is about 35 miles from Pascagoula; we have another channel at Pascagoula, and we have another one at Gulfport, another 30 miles to the westward; and another channel at New Orleans, which is about 60 miles to the westward.

What we are trying to do here is to prevent the construction of an entirely new channel which would make the fifth channel in a 125-mile area, and which would be only used for this ammunition depot.

What we are trying to do, I say, is to tie in to this proposed ammunition depot channel and then go into the existing Pascagoula Channel.

Mr. Chairman, it is quite obvious that with the need for the channel at Pascagoula, that that channel is going to be maintained on some basis. We are very much in hopes that this whole thing can be worked out here not only to the advantage of the local people and the local economy, but to the interests of the Government, thereby obviating, as I say, an additional channel which would be used only for this one specific purpose, and which may or may never be used; but

which would be dredged at this enormous cost. Now I speak, of course, of the ammunition depot channel. What we are trying to do, I repeat, is to tie all of these projects in together.

Senator STENNIS. Mr. Chairman, I would like to ask General Itschner one question.

General, we have talked on this matter over the telephone. You say, even though you do not have your reports, you have set aside funds for that report to be made, and based on the information available you think it is going to qualify clearly under the law, do you not?

General ITSCHNER. We have set aside $5,000 for the purpose of completing the report on the Pascagoula Channel. Based on the information that we have from the city as to the prospective development in that area, including the plant, it would qualify as a justifiable project.

Senator STENNIS. Mr. Chairman, thank you again, and reserving the right, if we may, to put in documentary proof and other evidence on this later, that concludes what we have to present now.

Senator BUSH. Without objection, it is so ordered.

(The additional information is as follows:)

PASCAGOULA HARBOR, MISS.

Location: Pascagoula Harbor is located along the lower 6.8 miles of Pascagoula River and the lower 4 miles of Dog River. It is in southeastern Mississippi, about 61 miles by water west of Mobile Harbor, Ala., and about 44 miles east of Gulfport Harbor, Miss.

Report authorized by: House Public Works Committee resolution adopted August 16, 1950.

Existing project: Provides for a through channel of the maximum dimensions that can be secured by the expenditure of $283,000, but not exceeding 25 feet deep and 300 feet wide across the outer bar at Horn Island Pass, thence 22 feet deep and 225 feet wide to the railroad bridge at Pascagoula, thence 22 feet deep and 150 feet wide, to a point on Dog River 4 miles above its mouth. The River and Harbor Act of 1950 modified the project to provide for a cutoff channel in Dog River. The total length of the existing project is 21.7 miles.

Plan of recommended improvement: (The survey report covering this harbor has not as yet been completed by the division and district engineers of the Corps of Engineers).

Project desired by local interests: Channel from the Gulf of Mexico to the L. & N. Railroad bridge in Pascagoula, having a depth of 30 feet and a width of 250 feet, with 35-foot over the bar. Local interests have indicated that an oil company is planning to build a refinery at Pascagoula and there is a possibility that an aluminum company may build a plant in the area to take ore shipped from British Guiana.

Estimated cost (preliminary):

From Gulf of Mexico to beacon A	$392,000
From beacon A to railroad bridge	485,000
Total	877,000

Remarks: This project represents an emergency need for channel improvement of an existing channel to meet the contemplated shipping needs from the planned installation of a refinery at Bayou Cassotte. The committee was told that as a part of the development plans the local authorities are going to spend $2 million for a channel leading from Bayou Cassotte to the public channel.

JULY 23, 1954.

Col. HARRY L. FOX,
District Engineer, Corps of Engineers, Mobile, Ala.

DEAR COLONEL FOX: Several days ago I called you over the phone and gave you certain information that I had available in reference to the Pascagoula Channel, also to the proposed development at Bayou Cassotte. I explained to you that at

the present time the board of supervisors have authority to issue $2 million in bonds for the purpose of dredging the Pascagoula Channel and dredging a channel into Bayou Cassotte. It is the intention of the board to dredge this channel into Bayou Cassotte from the proposed channel going to the ammunition dump, routed through Horn Island Pass to beacon A; thence to the ammunition dump site. At the present time, we have a proposal from the Southland Oil Co. that they will build an oil refinery at Bayou Cassotte of approximately 20,000-barrel capacity. The tonnage coming from this refinery, according to Mr. Else, chief engineer for the company, would be as follows, considering crude oil at 20 gravity:

Fifteen thousand barrels of domestic crude refined per day would amount to 2,190 tons;

Five thousand barrels imported oil would amount to 730 tons, making a total of 2,920 tons.

It is estimated 10 percent of this oil would be used for fuel, amounting to 292 tons; another 10 percent would be sold locally, making a total of 584 tons, leaving a re nainder of 2,336 tons per day to be shipped out from the refinery. Of this, I would estimate 90 percent would be by water, shipped coastwise.

If this channel is dredged into Bayou Cassotte, we have several prospects that would locate rather large industries that, in my opinion, would use considerable bauxite, also, we have a possibility of some of the stockpiling ore at this site. The docks at Bayou Cassotte would be served by both the Mississippi Export and the L. & N. Railroads, and we have competitive freight rates with other gulf ports. We cannot count on the prospective industries for the purpose of computing tonnage, but, in my opinion, we have a very good chance of securing several of these industries.

In reference to the channel from beacon A on into Pascagoula, I think you have a letter from the Ingalls Shipbuilding Corp. that explains their very critical position. The Ingalls Shipbuilding Corp. is the laregst industry in Mississippi in point of number employed. Their payroll is the largest payroll in Mississippi. They contemplate bidding on larger tankers that the Maritime Commission contemplates building, and this industry has a splendid record for work done for the Navy and Maritime Commission. We certainly think they are entitled to some consideration in this matter.

Now, I know that the only actual tonnage that you will be able to present to General Itschner will be the question of the oil refinery, but, I wanted to call to your attention the possibilities of the industry development and certain Jackson County would not be issuing $2 million worth of bonds, making the investment in this channel and improvement unless they were very confident that the development would be worth something to our section of the State.

If there is any other information I can give to you, please call upon me.

Very truly yours,

HERMES GAUTIER, *State Senator.*

THE INGALLS SHIPBUILDING CORP.,
Pascagoula, Miss., July 20, 1954.

Hon. JOHN C. STENNIS,
United States Senate, Senate Office Building,
Washington, D. C.

DEAR SENATOR STENNIS: Mr. Hermes Gautier received a telephone call today from Col. Harry L. Fox, district engineer, United States Corps of Engineers, Mobile, in which he asked that he be furnished information not later than noon tomorrow as to any requirements of the Ingalls Shipbuilding Corp.'s Pascagoula yard for present and potential contracts as to the channel depth.

He also asked that he be furnished with the approximate amount of tonnage that might be moved through the channel for the proposed refinery. Mr. Hermes Gautier is endeavoring to secure that information.

I am attaching hereto a copy of a letter I have today written Colonel Fox and also a copy of a letter addressed to me by our president, Mr. Monro B. Lanier, on June 2 in which he sets forth the requirements as they affect our existing contracts. In this letter Mr. Lanier mentions various ship construction contracts in which this yard expects to participate, particularly the 20 high-speed supertankers for the Military Sea Transport Service. However, there are some tankers for some private interests and also some destroyers and the various other vessels for the MSTS, all of which require deep water.

Mr. Gautier and I expect to talk to Colonel Fox again tomorrow after he has had an opportunity of receiving and reviewing the information which we are sending him.

I am also writing Congressman Colmer with reference to this matter today.

Very truly yours,

W. R. GUEST,
Executive Vice President.

THE INGALLS CO.,
Pascagoula, Miss., July 20, 1954.

Subject: Pascagoula Channel.

Col. HARRY L. FOX,
District Engineer, Corps of Engineers,
Mobile, Ala.

DEAR COLONEL FOX: It has been previously brought to the attention of your office that increasing the depth of the Pascagoula Channel to 32 feet, which is the authorized depth, is very imperative on account of contracts which we hold with the United States Navy for six LSD's and, more particularly, the AGB–4 icebreaker. This situation in regard to the channel and its effect on the operations of this shipyard, not only for our present contracts but those which will be let in the future, is well set forth in a letter from our president, Mr. Monro B. Lanier, addressed to me on June 2, 1954, two copies of which I am attaching for your information.

The present condition of the channel has already been reviewed by the Bureau of Ships through the Office of the Supervisor of Shipbuilding at Pascagoula and there is a production meeting on the icebreaker called by the Bureau of Ships in Washington for September 13, 1954. The agenda for that meeting sets forth a decision on the subject of delivery point, fitting-out activity, and prospective channel depth as affects the completion of the icebreaker contract.

You will note from Mr. Lanier's letter of June 2 that the ship in a light service condition would have a mean draft of about 26 feet, however, if the ship was not placed in a light operating condition and goes out without all of the fuel that is needed even for trial trip purposes it could possibly navigate through a 26-foot-depth channel at very slow speed. However, this would require that fuel be added at sea after the ship has passed through the channel.

We have assured the Navy that in any event the channel could be dredged so that it would not be less than 22 feet at any point before the time of delivery to overcome the shallow spots which now exist as low as 18 feet but that would require that the vessel be towed through the channel and not operated under its own power, putting both the Navy and our company to great expense in the cost of making the tests of the vessel.

Furthermore, if we do not have a 32-foot channel, it would be impossible for the Navy to outfit the vessel at Pascagoula, necessitating additional expense to the Navy for handling such outfitting activity elsewhere. The fitting out activity is not a part of our contract, however, in all of our past contracts with the Navy, this has been handled by us on a negotiated contract basis.

Very truly yours,

THE INGALLS SHIPBUILDING CORP.,
W. R. GUEST, *Executive Vice President.*

THE INGALLS CO.,
Pascagoula, Miss., June 2, 1954.

Mr. W. R. GUEST,
Executive Vice President,
The Ingalls Shipbuilding Corp., Pascagoula, Miss.

DEAR MR. GUEST: Referring to our many discussions in regard to the Pascagoula ship channel, I beg to state that the limitations of this channel and the continued sloughing of the banks and the shoaling is reacting against the prestige of the Pascagoula shipyard and, in fact, is interfering with the procurement of contracts for large ships for construction at this yard.

As I have previously stated both to the Navy and in a hearing before the Senate Committee on Interstate and Foreign Commerce, there are no commercial light draft ships now under consideration for construction. We have completed our contract for the last of our commercial ships. We hold contracts with the Navy Department for six LSD's, contracts NObs–3030 and NObs–3569, and the super

icebreaker, AGB–4, contract NObs–2984. In addition we have contract for two refrigerated stores issue ships for the Navy through Maritime Administration. Not one of these ships can pass through the channel under full trial conditions and must move out under the lightest draft conditions, which is not satisfactory or economical. The icebreaker cannot pass through the existing channel under her own power and with great difficulty even if towed, due to the shoaling referred to. This ship in light service condition draws aft 25 feet ¾ inch. Under full load for sea trial she would draw 28 feet 1¼ inches. Recent soundings of the channel show depths of as little as 18 feet 6 inches. Even if the channel were restored to the authorized depth of 22 feet, it would be insufficient for these heavy ships. This $25 million ship is the prototype of the larger icebreakers for the Navy. In view of the fact that we are not alone building the prototype but are the design agent, and hold contract with the Navy for the mobilization planning of this class vessel under contract NObs–5327, we were assigned the task as lead yard and given an allotment for the construction of a large number of these vessels in event of mobilization. After investigation of the channel conditions, the Navy has given up Pascagoula for mobilization ship construction and has assigned the future icebreakers to other yards in event of M-day. Meanwhile, we have reason to believe that the Navy is in great need of additional ships of this class, but Pascagoula will not be eligible to compete for their construction due to the deficiency in channel depth.

In the past we have succeeded, by extraordinary effort and supplementary dredging by the Army and emergency dredging during the war period, to get our ships out to sea even though a number have run aground, but the tendency is now to larger ships of deeper draft, indicated by the Mariner class vessels which we have recently completed and which in completely light condition were navigated with great difficulty through the channel. In the contemplated program for the conversion of the Mariner class cargo vessels to attack transports and attack cargo vessels for the Navy, the additional weight required would preclude our yard participating in such work, even with the presently authorized channel depth.

The ships now contemplated for future construction on which we could compete, if it were practicable and safe to get these deeper draft ships through the channel, include 20 high speed supertankers for the Military Sea Transport Service, drawing 27 feet aft in light service condition.

The only appropriation that has been requested by the Maritime Administration covers the Maritime share of the cost of four passenger ships. Two of these are for Moore-McCormack Lines and will draw as much as 28 feet in light service condition. This will preclude our bidding on these ships, although we have built the majority of the cargo vessels operated by that line and feel that we should be the successful bidder on these vessels.

We have been advised by the Esso Standard Oil Co. that we will be invited to bid on a 32,000 to 35,000 ton supertanker, if we can get the tanker out of the yard. Unless we could be guaranteed a 32 foot depth of channel, we will be unable to bid.

In the 1955 fiscal year (beginning July 1, 1954) the Navy Department has included in their budget five leader destroyers practically equivalent to 6,000-ton cruisers on which we cannot bid due to limitations of channel.

The Military Sea Transport Service through the Navy Department have a bill before Congress, requesting an appropriation for the construction of seven ice-protected vessels, meaning extraordinarily heavy structure. This program includes one icebreaker. We have not yet the full specifications, but it appears that these vessels will draw more water than the depth of the Pascagoula Channel will permit.

It should not be overlooded that the Pascagoula shipyard is now one of the largest and most efficient shipyards in America, but is the only large competing yard which has not a sufficient depth of channel maintained by the Federal or State Government, to permit the construction of any of the classes of ships referred to.

It should be emphasized to those who are giving consideration to this subject that the payroll of the Pascagoula shipyard, including subcontractors, Navy and Maritime personnel, was approximately $20 million in 1953 and is running at about the same rate so far this year. In addition, the purchases of material, much of which were procured from Mississippi and adjoining States, aggregated approximately $40 million. It is obvious that if the Pascagoula shipyard cannot compete for the larger classes of ships now contemplated, due to deficiency in channel depth, the resultant curtailment of production would immediately have a serious impact upon the economy of the State of Mississippi and adjoining areas.

In view of this situation and the mobilization potentiality of this, the only shipyard capable of building large ships on the entire gulf coast, it is of major importance not alone to the economy of the area but to our national defense, that immediate provisions be made by State and/or Federal Government to provide a channel with depth of not less than 32 feet.

Very truly yours,

MONRO B. LANIER, *President.*

Mr. COLMER. May I express my appreciation for being permitted to testify?

Senator BUSH. We thank you for coming over.

NAWILIWILI AND PORT ALLEN HARBORS, T. H.

Senator BUSH. The next project before the committee is the Hawaiian project.

Governor King is here. I didn't dare to pronounce this name, but perhaps you will.

STATEMENT OF HON. SAMUEL W. KING, GOVERNOR OF HAWAII

Governor KING. Nawiliwili. It refers to the wave action, which is one reason why we need the improvement of the port.

Senator BUSH. Might I say the committee decided yesterday that we have a great deal of business here and we would like if possible to have every witness confine his remarks to not exceeding 10 minutes, and if he can do it within that it will be a great accommodation to the committee.

Governor KING. Mr. Chairman, really the Corps of Engineers as usual made a very complete report and analysis of the advantages of this improvement and has approved it. I have a very brief statement which I can leave with the clerk.

Senator BUSH. Would you like to comment on it and we can incorporate it in the record.

(The prepared statement of Governor King is as follows:)

MEMORANDUM RE NAWILIWILI HARBOR

The report of the Chief of Engineers, United States Army, on Nawiliwili and Port Allen Harbors, Kauai, is submitted in response to a resolution by the Committee on Public Works of the House of Representatives adopted June 17, 1948, requesting a review of the reports on these projects to determine whether further improvements are advisable at Nawiliwili and Port Allen Harbors on the island of Kauai, T. H.

The report recommends that no further improvement at Port Allen Harbor is advisable at this time.

The Board recommends modification of the existing project for Nawiliwili Harbor to provide for deepening of the entrance channel, enlargement of the harbor basin, and construction of a revetted-fill area at an estimated cost to the United States of $1,121,600 for new work and $5,000 annually for maintenance in addition to that now required. The local interests are to furnish free of cost to the United States lands, easements, rights-of-way, and quarrying rights, hold the Federal Government free from damages due to construction and maintenance, contribute in cash approximately $38,500 to pay for the cost of construction of the revetment of the fill area, and maintain and operate terminal and transfer facilities and operate the harbor in accordance with regulations prescribed by the Secretary of the Army.

Nawiliwili Harbor is the most important port on the island of Kauai. The larger portion of the island's sugar production now moves through this port. The improvements are necessary in order to accommodate the larger ships which now engage in the commerce of the port.

The Legislature of the Territory of Hawaii adopted a resolution which was approved by the Governor on May 1, 1953, urging that the Congress of the United States approve the recommendations of the Corps of Engineers regarding the improvement of Nawiliwili Harbor.

I would also like to present a copy of a resolution adopted by the Kauai Chamber of Commerce on May 24, 1954, which was sent to the late Delegate Farrington for submission to Congress supporting this project.

Governor KING. I would like to point out this is the principal port of this island and it now handles about 70 percent of the freight in and out of the island of Kauai, and it has been estimated to be about 310,000 tons a year. It handles sugar and pineapples going out and all sorts of merchandise and fertilizer coming in, including oil and tankers coming in.

The harbor faces the northeast and the waves come in there. It has been already partly improved by a breakwater and a dock, and this project merely extends the improvements by the expenditure of approximately $1,121,600 of new work and $5,000 annually for maintenance, to make the harbor safe and deeper for larger ships, and for freight ships coming from the west coast and loading and unloading at the port.

Senator BUSH. What is the nature of the traffic?

Governor KING. General merchandise and fertilizer and fuel oil coming in, and sugar and pineapple going out. It ships about 150,000 tons of sugar. Nowadays sugar is shipped in bulk. There is a big bulk warehouse or storage place there. The plantation ships its sugar there and it is stored there, and the ship comes in and it is siphoned out like wheat. They do not bag it any more. Therefore they need fairly large draft freight vessels to come up and tie up in the harbor and load up with sugar and depart for the refinery in California.

The commerce of the island has increased considerably, and the need for a better port is quite urgent. The Territory has already expressed its willingness to furnish the land and rights-of-way and a certain amount of cash contribution, as well as to maintain a terminal there in accordance with the rules and regulations of the Secretary of the Army as transmitted through the Corps of Engineers.

I have a copy of the resolution of the Territorial legislature asking that the job be done, and a copy of the resolution from the Kauai Chamber of Commerce to the same effect.

With this brief report I think the committee will have all of the information it needs.

Senator BUSH. Thank you, and without objection those two documents as well as the government's statement will be incorporated in the record.

(The documents referred to are as follows:)

TERRITORY OF HAWAII, SENATE JOINT RESOLUTION 88

JOINT RESOLUTION 16 RELATING TO HARBOR IMPROVEMENTS, ISLAND OF KAUAI

Whereas the enlargement of the harbor and the deepening of the entrance channel of Nawiliwili Harbor, Kauai, is a great need of the Territory of Hawaii; and

Whereas the Corps of Engineers has studied the need for enlarging the harbor and deepening the entrance channel and are preparing a report thereon; and

Whereas the construction of bulk sugar handling facilities at Nawiliwili has caused a great increase in tonnage shipped; and

Whereas wind and wave conditions make the requested improvements of great necessity to the safety of vessels using the harbor: Now, therefore,

Be it enacted by the Legislature of the Territory of Hawaii.

SECTION 1. The Congress of the United States of America is hereby respectfully requested and urged to approve the recommendations of the Corps of Engineers concerning the improvement of Nawiliwili Harbor, Kauai, T. H.

SEC. 2. This joint resolution shall take effect upon its approval.

Approved this 1st day of May A. D. 1953.

SAMUEL WILDER KING,
Governor of the Territory of Hawaii.

KAUAI CHAMBER OF COMMERCE

LIHUE, KAUAI, T. H.

MAY 24, 1954.

RESOLUTION

Whereas a $1,121,600 project for additional improvements to Nawiliwili Harbor on the island of Kauai, Territory of Hawaii, has been recommended by division and district offices of the Corps of Engineers, United States Army, and the two offices, the South Pacific division and San Francisco district, whose territory for civil works includes Hawaii, have transmitted their favorable recommendations to the Chief of Engineers in Washington, D. C., and the report which came before the Board of Engineers for Rivers and Harbors for review was approved; and

Whereas Col. Paul D. Berrigan, South Pacific division engineer, and Col. Geo. H. Walker, acting district engineer of the San Francisco district, have recommended that the Nawiliwili Harbor existing project be modified to provide for:

(1) Deepening of the harbor entrance channel to a project depth of 40 feet below mean lower low water;

(2) Enlargement of the harbor basin by dredging along the westerly side of the existing basin, an area with an average width of 440 feet and an average length of 1,230 feet to a project depth of 35 feet below mean lower low water and;

(3) Construction of a revetted-fill area of about 21 acres by disposal of dredged material in the area between the shore and bulkhead lines west of the enlarged harbor basin. The land so created by dredged material would become the property of the Territory of Hawaii.

Federal costs of these proposed modifications have been estimated at $1,121,600 for new work, not including costs of navigation aids, and $5,000 annually for maintenance in addition to that required for the existing project; and

Whereas on September 25, 1953, Colonel Berrigan, South Pacific division engineer, announced that all persons interested in the proposed harbor improvement project had the privilege to present their views to the Board of Engineers for Rivers and Harbors, a permanent body to whom all survey and review reports of this nature are referred, and in compliance with this announcement, Matson Navigation Co., Territorial Board of Harbor Commissioners, Kauai Consolidated Terminals, Ltd., Kauai Chamber of Commerce, and others have approved and recommended the project be carried to completion as soon as possible: Therefore be it

Resolved, That this chamber recommend and urge that Congress appropriate moneys for, and thereby cause work to be started quickly on the Nawiliwili Harbor dredging project, to the end that this harbor be a safe harbor befitting its commercial importance; and be it further

Resolved, That a copy of this resolution be forwarded to Hon. Joseph R. Farrington, Delegate to Congress; the Chairman of the Board of Engineers for Rivers and Harbors; Samuel Wilder King, Governor of Hawaii; Mr. Benjamin F. Rush, chief engineer, Board of Harbor Commissioners, Territory of Hawaii; chairman of the Rivers and Harbors Committee of the United States Senate and the House of Representatives.

Respectfully submitted.

J. W. BERTRAND,
Chairman, Transportation Committee.

Senator BUSH. May we ask the Army engineers to speak about the project?

Colonel ALLEN. This Nawiliwili Harbor on the island of Kauai has an authorized project which provides essentially for a 35-foot

entrance channel through a breakwater and an interior basin with a project depth of 35 feet. This is a completed item of work in the entrance channel and interior basin to a depth of 35 feet.

As Governor King pointed out, the amount of tonnage going in and out of this harbor increased. You may inquire as to why on the ships that were using this harbor when it was authorized a number of years ago it was necessary to go to the then extreme depth of 35 feet. As you are aware, in the Pacific these Hawaiian group islands are subjected to the long period swells, which have an origin many thousands of miles away from Hawaii. Even though the weather is completely storm-free in the vicinity of Hawaii, the harbors and islands in the Hawaiian group are subjected to this high period swell which can cause a change in the water depths in here by reason of the swell from as much as 5 to 20 feet, depending on the degree of the swell.

In order to provide for a safe exit and entrance to this channel it was necessary at that time to go to 35 feet. It has now been found with the use practically exclusively of the C–3 type vessel, which draws close to 30 feet—29 feet 6 inches—that the navigation of this channel in any type of heavy weather or a period where the swells are encountered, creates a condition where it is either very unsafe to passage this entrance channel or the ship must wait outside until the weather improves.

In transiting this channel it is necessary for the ship to use two tugs. It passes the breakwater and maneuvers around with its back into pier 2, and the tugs positioning it back into pier 2. In leaving the channel they work in the reverse direction by swinging in the bow and coming in this way and backing into the channel and again leaving in that direction. That is the reason for the recommendation in this document to increase this area for maneuverability and safe maneuvering in the interior basin.

The project document as recommended by the Chief of Engineers, recommends the improvement of the entrance channel to 40 feet and the extension of the interior basin to 35 feet. Some of this material will be placed on a bulkheaded area here, which is to be provided by local interests in order to permit facility for future harbor enlargement.

The cost of the project revised to current cost figures to the Federal Government is $1,166,400. The benefit-cost ratio of the project is 1.3.

The project has been referred to the various agencies, none of whom offer any objection to the submission of the report.

Senator BUSH. Thank you very much, Colonel.

Governor KING. May I add a note from a seaman's point of view. The double pier is a little difficult and they need all of the depth and turning basin they can have in order for the larger freight vessels to negotiate this without the assistance of two tugs, so that there will be a considerable savings over a period of years in the handling of vessels there. There will be at least 120 round trips a year, or 10 ships a month, that use that harbor.

Senator BUSH. Thank you very much, Governor.

The prepared information on this project will be inserted at this point.

(The document referred to is as follows:)

NAWILIWILI AND PORT ALLEN HARBORS, KAUAI, T. H.

(H. Doc. 453, 83d Cong.)

Location: Nawiliwili Harbor and Port Allen Harbor are about 21 miles apart and are on the southeasterly coast and south coast, respectively, of the island of Xauai, Territory of Hawaii.

Report authorized by: House Committee on Public Works, June 17, 1948.

Existing project: Nawiliwili: Rubble-mound breakwater 2,150 feet long; entrance channel 35 feet deep, 600 feet wide, and about 2,400 feet long; and an inner basin 35 feet deep, 1,100 feet wide, and about 2,000 feet long. Completed in 1930. Costs to June 30, 1951, $1,197,178 for new work and $302,138 for maintenance. Port Allen: Entrance channel 35 feet deep and 500 feet wide; basin 35 feet deep, 1,200 feet wide, and 1,500 feet long; and a breakwater 1,200 feet long. Completed in 1948. Costs to June 30, 1951, $752,645 for new work and $72,848 for maintenance.

Plan of recommended improvement: No improvement of Port Allen Harbor needed at this time. Nawiliwili: Deepen channel to 40 feet over existing project width and enlarge basin to include an additional area, 440 feet wide with an average length of 1,230 feet, deepened to 35 feet.

Estimated cost:

	Federal	Non-Federal	Total
OCE report (November 1952)	$1,121,600	[1] $38,500	$1,160,100
Current (October 1953)	1,166,400	[1] 39,500	1,205,900

[1] Cash contribution.

Local cooperation: Provide easements and rights-of-way, hold and save United States free from damage, contribute in cash cost of revetment of the fill area, $39,500, and maintain and operate terminal and transfer facilities and the improved harbor.

Project economics:

	OCE report	Current
Annual charges	$47,000	$48,600
Annual benefits:		
Direct benefits	58,030	60,400
Increased land value	2,700	2,700
Total	60,730	63,000
Benefit-cost ratio	1.29	1.3

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Remarks: The project would be fully justified on the basis of the direct benefits.

REELFOOT LAKE AREA, TENNESSEE AND KENTUCKY

Senator BUSH. If there is nothing further on this we will proceed to the next item.

Senator Case is not here and I wonder if Senator Gore would like to take his project up. It is the Reelfoot Lake area in Tennessee and Kentucky.

Senator GORE. I have two constituents from Tennessee here whom I would like to introduce, but first I would like to have the Corps of Engineers testify.

Senator BUSH. All right. Colonel Starbird.

Colonel STARBIRD. The Reelfoot Basin is on the east side of the Mississippi River. Generally it is this area as shaded in green on the small-scale map. You can note that it is located about 40 to 70

air-miles from the city of Cairo, where the Ohio enters the Mississippi. The larger scale map of the area is also shown.

The basin has a maximum dimension north to south of approximately 35 miles. It has a maximum dimension east to west of about 20 miles, and extends from the Mississippi, up on the high bluff to take in the area of the tributaries draining into Reelfoot Bayou.

The area has a population of 25,000 individuals. The largest city is the city of Hickman. The area is largely agricultural and devoted to wildlife preserve. It is a very wealthy agricultural area lying in part in the alluvial plain of the Mississippi River.

The front line levees give the area reasonable protection against Mississippi River floods. There is a backwater effect now felt on the lower end of Running Reelfoot Bayou northward for a distance of 6 to 8 miles during high flood on the Mississippi River. However, there is authorized construction that would obviate that backwater effect. There are also authorized improvements for drainage in the vicinity of Lake No. 9 and Harris Ditch.

The overall basin is drained by Bayou DeChien, which flows into Reelfoot Lake and in turn flows out through Running Reelfoot Bayou into the Obion River.

The channel of Reelfoot Bayou is badly blocked and cluttered at the present time by debris which has washed in over a period of years. There is an authorized project for the improvement of the lower 7 miles of Running Reelfoot Bayou. The basin has a very serious flood problem, and serious floods occur on the average of once in every 3 or 4 years.

The average annual damages are estimated at $496,000 per year and affect approximately 37,000 acres of land. Better than one-third of this land is in active cultivation.

There have been certain improvements within the area in the past. The most important, which is pertinent to our discussion today, is a spillway with flash boards which was put in in part by the State of Tennessee and in part by the Fish and Game Service, for the purpose of improving a part of the basin as a fish and game refuge.

The plan recommended by the Chief of Engineers for remedying the situation is one of channel improvement. He recommends the improvement of Bayou du Chien Channel and the improvement of Reelfoot Channel to the point where there is already an authorization for improvement. The estimated cost of the project to the Federal Government would be $748,100. This sum includes the cost of construction, and any necessary railroad relocations.

Local interests would be expected to bear the cost of lands and rights-of-way and any other public relocations. The estimate cost to them is $407,200. They would also be expected to take on the responsibility for maintenance and operation of the project, and the estimated cost for this activity is $27,000 per year.

The project has an estimated benefit-cost ratio of 3.87 to 1.

We have had comments on the project from the State of Tennessee and the State of Kentucky, neither of whom offer any objection to the plan.

We have had, at field level, a comment from the Soil Conservation Service. The comment was favorable at field level, but we have not yet had comment at Washington level. At Washington level we have heard from the Department of the Interior. The Department of the Interior made two comments which should be called to your attention.

They point out there is silting in Reelfoot Lake. They request, therefore, that, as part of this project, there be constructed a siltation basin at the mouth of Indian Creek.

Senator GORE. Colonel, I was on this lake last fall and I believe it was at this particular point on the map which you have just indicated that there is the maximum amount of siltation. Is that correct?

Colonel STARBIRD. I believe that is correct, sir.

Senator GORE. If this siltation continues unchecked it threatens to impair this Reelfoot Lake recreation site, which is one of the most attractive recreation and wildlife sites in the entire country. Is that correct?

Colonel STARBIRD. I cannot answer that, sir. I cannot say that it impairs it.

Senator GORE. When you say you cannot say it impairs it do you mean because of lack of study that you made on that particular problem?

Colonel STARBIRD. Lack of knowledge of that particular problem. Right, sir.

Senator GORE. Proceed.

Colonel STARBIRD. They request the construction of a siltation basin here at an estimated cost of $67,800.

Senator GORE. Is that involved in the project?

Colonel STARBIRD. It is not, and I will explain in a little more detail in a moment. Also they request that the construction of Bayou du Chien improvement be deferred at this time until further study can be completed on ways and means of decreasing the siltation in the basin. There have been numerous conferences on this subject in the field. The Corps of Engineers recognizes that there is siltation. They also believe, however, that a long-range study should be conducted for the purpose of determining the best way of remedying this situation.

They point out, too, that the works proposed by the Corps of Engineers in this particular project do not worsen the situation. In view of the fact that Bayou du Chien at the present time flows through a very flat channel it is not basically a silt carrier.

The Corps of Engineers has expressed a desire to participate in a long-range study which would consider the effects of siltation, but it does not recommend construction of the siltation basin as a part of this specific study, which is designed to take care of the flood problems. The project report was only recently referred to the Bureau of the Budget and the Bureau of the Budget has not commented as yet.

That is all I have, unless you have questions, sir.

Senator BUSH. Thank you very much, Colonel.

Senator GORE. Mr. Chairman, I would like to introduce to the committee one of my distinguished constituents and friends, the county agent of Lake County, Tenn., the area most directly affected by the proposed project, Mr. Martin of Lake County, Tenn.

Senator BUSH. Mr. Martin.

STATEMENT OF SCHUYLER G. MARTIN, COUNTY AGENT, TIPTONVILLE, TENN.

Mr. MARTIN. Mr. Chairman and gentlemen. My name is S. G. Martin.

It would be extremely difficult to add anything to what the colonel just told you. He made a splendid report, covering it mighty well.

I would like to say as a representative of the local people that we wholeheartedly concur in the report that the Corps of Engineers made and filed with you.

Now as a local statement from the local people I would like to say that the area involved there is located in three counties. The three county agents in those counties got together and made up an estimate of the annual losses for the past 10 years. We find that we have an average annual crop loss there of approximately a half million dollars. I believe our good Senator will bear me out down in Tennessee, especially when you get down to the farm level, a half a million dollars is still a lot of money.

Senator GORE. I want the record to show that the junior Senator from Tennessee bears out his constituent in any good thing he wants to say about Tennessee.

Mr. MARTIN. Thank you.

Our local interests are willing and financially ready to enter into this project on the cooperative arrangement that has been proposed by the Corps of Engineers. We are ready to come up with our part of the financial part of the deal. Other than that there is little I can add to the statement that has been made.

Senator BUSH. Thank you.

Senator GORE. Mr. Chairman, I would like to present not my constituent, but a constituent of the distinguished Senator from Kentucky, whose home area is likewise affected by this proposed project, Mr. Robert Sanger, of Hickman, Ky.

Senator BUSH. Mr. Sanger.

STATEMENT OF ROBERT SANGER, HICKMAN, KY.

Mr. SANGER. Mr. Chairman and gentlemen. There is very little I can add to what the Army engineers and Mr. Martin have had to say. Of course, it does affect Kentucky too. It is the same delta area from Hickman south, and it is affected in the same way.

Of course, we are ready to put up our part in the upper part of the lake and agree with the engineers and share the local interests' contribution.

Senator GORE. The engineers' report is before the committee and the report of the Department of the Interior I believe is before the committee.

The Soil Conservation Service report is before the committee too, is it not?

Colonel STARBIRD. We have not received their reports.

Senator GORE. I believe my office has received that report of approval. That I believe is a sufficient presentation, Mr. Chairman, due to the exigencies of the situation here under which we are operating.

Senator BUSH. Thank you, Senator, and I am very much obliged to you gentlemen for coming up.

REELFOOT LAKE AREA, TENNESSEE AND KENTUCKY

(Report of Chief of Engineers, June 17, 1954)

Location: The Reelfoot Basin, situated on the east bank of the Mississippi River, extends 35 miles in a southerly direction between Hickman, Ky., and the Obion River, tributary of the Mississippi River, in Tennessee.

Report authorized by: Resolution of the Committee on Public Works of the United States Senate, adopted December 20, 1950.

Existing project: The project for Mississippi River and tributaries authorized by the act of May 15, 1928, as amended, provides for the extension of the Tiptonville-Obion River levee about 28 miles; channel improvement and diversion of Obion River; enlargement of lower 7.5 miles of Running Reelfoot Bayou; and excavation of Lake No. 9 and Harris Ditch diversion canals into Reelfoot Lake and Running Reelfoot Bayou, respectively. About 8 miles of levee have been constructed.

Plan of recommended improvement: Enlargement of Running Reelfoot Bayou and Bayou du Chien.

Estimated cost:

March 1954 price level:	
Federal	$748,100
Non-Federal	407,200
Total	1,155,300

Local cooperation: Furnish lands, easements, and rights-of-way for construction; provide all State, county, and farm bridges included in plan of improvement; and maintain and operate the completed improvements.

Project economics:	*Current*
Annual charges	$62,640
Annual benefits	242,300
Benefit-cost ratio	3.87

Comments of the Bureau of the Budget: Not received as of July 26, 1954.

Remarks: The United States Fish and Wildlife Service and the State of Tennessee suggest that the improvement of Bayou du Chien (largely in Kentucky) be deferred at present for fear of silt load that may be brought into Reelfoot Lake. The district engineer finds no basis for the deferral of improvement of Bayou du Chien which is a flat valley stream and not a silt carrier.

THE BIG SIOUX RIVER AND ITS TRIBUTARIES, IOWA AND SOUTH DAKOTA

Senator BUSH. Senator Case, we deferred your item until you could be here. It is the Big Sioux River at Sioux Falls, S. Dak.

Would you like the engineers to make their statement first?

STATEMENT OF HON. FRANCIS CASE, A UNITED STATES SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator CASE. Mr. Chairman, first I would like to say I appreciate your courtesy in transposing the position here of the projects. Of course, the chairman is well aware of the conditions under which the Senate has been proceeding in the last 48 hours and the responsibilities that each member has to try to coordinate his individual responsibilities.

I might just say this by way of preliminary. The Sioux Falls, S. Dak., project is a project to provide relief for the largest city in the State of South Dakota. The Big Sioux River makes a bend right at the city and goes around the city. Consequently the heart of the city and the municipal airport are surrounded by the stream, which at high flood throws water over the airport and over a great deal of what is becoming a wholesale industrial section.

The Army engineers a few years ago proposed a plan which called for some development on the Sioux River in the rural areas above Sioux Falls, and also a project for the city. There was a difference of opinion with respect to the practicability or the local acceptance of the rural sections, so a modified project has been proposed which would provide a passage channel. In fact, there is a small bypass channel now.

I will let the engineers describe it more in detail, but the brief picture of it is to improve the channel and also provide the bypass, so that the water instead of taking the long way around and consequently flooding across a part of the city of Sioux Falls, would connect the two nearest points and thereby avoid the flooding of the city.

The project has been approved by the local people at Sioux Falls and by both the city and the State of South Dakota. The city of Sioux Falls has made representations that it is willing to accept the local responsibilities both for itself and some originally proposed, I believe, for the State. But in any event, we are willing to meet the local requirements.

The Department of Agriculture submitted a favorable report. As I understand it, the Army engineers have not submitted their letter through the Bureau of the Budget, although it is at the Bureau of the Budget now, because they have been awaiting a report from the States of Iowa and Minnesota.

By looking at the map you can see, however, that the Big Sioux River is entirely within the State of South Dakota until after it leaves the city of Sioux Falls. So the interest of Minnesota, which has a tributary which flows into the Big Sioux below Sioux Falls, as does the State of Iowa—their interests in Minnesota are secondary to a local project within the city of Sioux Falls.

Therefore I hope that in view of the fact that the project was developed by the Army engineers and a favorable recommendation was made by the division engineer and a favorable review by the Board of Engineers for Rivers and Harbors, and a favorable report I believe will be given by the engineers here, I am hopeful that a letter can be requested in whatever form the committee feels is necessary, as it is consistent with some prior situations like this, and include the project in the bill at this time.

I would like to have the Army engineers make their own statement as to the details of the project, and I believe that will confirm what I have said as to their approval and recommendations.

Senator BUSH. Colonel Starbird.

Colonel STARBIRD. I would like to add 1 or 2 statistics in substantiation of what Senator Case has already said. This is a big river. It has an overall length of nearly 400 miles and drains about 9,500 square miles. It has a record of very, very frequent floods. In fact, although we have no good record of long duration, reconstructing from historical records we believe high waters occurred 72 times in 80 years along the river, and we estimate the annual overall damages as being around $2 million.

As the Senator explained, the report before you considers the overall problem. However, because of lack of full support of certain elements of the plan only the portion of the plan dealing with Sioux Falls proper is recommended in this particular document.

The population of Sioux Falls is somewhere in the neighborhood of 50,000 persons, or it was that in 1950.

Senator CASE. I might say that the estimated population currently is 58,000.

Colonel STARBIRD. At the present time, as pointed out by Senator Case, the river flows in an arc around the edge of the city. There is a drainage ditch which comes in from the north and which flows through a limited channel in a more direct course.

The overall capacity of the river itself at the present time is only about 2,600 cubic feet per second. We have had flows as high as 13,000 cubic feet per second in recent years, and we believe that the flow can go substantially above that.

Storms are brought on by 1 of 2 cases: Either extreme snow melt with rain or torrential downpour somewhere in the basin during the summer months.

The recommended plan for improvement would be one in which an existing small drainage ditch would be developed. That ditch would have control structures at its upper end. It would be a levee diversion ditch. The ditch would have a capacity of 10,000 cubic feet per second. By leveeing and channel improvement along the present course of the Sioux River, the channel would be increased to 6,000 cubic feet per second. The control structure at the Y would be so designed as to spill the channel capacity down the old course of the river, and to divert excess water down the improved drainage channel.

Skunk Creek can also bring a substantial flow into the city, so the channel of the Sioux below the confluence of Skunk Creek would be increased to the neighborhood of 12,000 cubic feet per second. The overall capacity that would be available then would be somewhere in the neighborhood of 20,000 cubic feet per second.

The total estimated cost to the Federal Government of the work of construction and railroad relocation would be $3,430,000. Local interests would be expected to take care of highway relocations and other relocations and furnish the necessary lands and rights-of-way. The initial cost to them is estimated as $514,000.

The cost of maintenance and operation is estimated as something over $10,000 a year, which local interests would also carry.

The project has a benefit-cost ratio of 1.16 to 1. When completed it will remedy the situation which now exists where, for example, in 1951 and 1952 there was $1 million worth of damage in this particular city.

The Department of the Interior reviewed the report and had no objection. The State of South Dakota as explained by Senator Case has approved the report. The Department of Agriculture has reviewed it and had no objection to the plan. That Department pointed out that the last increment on the protection we were giving, the high degree of protection, was not justified in terms of the cost for that increment as contrasted with the benefit. However, we are pointing out in answer we have a very critical situation where there are elements which cannot be evaluated in terms of dollars. We feel that that added increment of protection is essential so as to take care of the danger to human life and the danger to public health, within the city proper.

The Bureau of the Budget has not reviewed the report. The report is now en route to the Bureau of the Budget. We held until such time as we had received reports from other agencies which we felt might have a definite bearing on the project.

Senator CASE. Mr. Chairman, I would like to commend Colonel Starbird for that excellent statement, and I wonder if you would point out the airport there.

Colonel STARBIRD. The airport is right here, sir.

Senator CASE. Right where the worst flooding occurs?

Colonel STARBIRD. That is correct.

Senator CASE. Is it not correct that some of the barracks which were used when that was an Air Force Technical School during World War II are now used for residences by people, so that there is considerable local population as well as an industrial development surrounding the airport, which is now used for municipal purposes?

Colonel STARBIRD. I cannot confirm that from my personal knowledge.

Senator CASE. I may state I have been there and some of that housing is so used, so that the danger to human life is considerable when you have a large flood there, in addition to the public losses from the incapacity of the airport. During the big flood of the Missouri River a couple of years ago I flew out to go over that, representing the Public Works Committee. We intended to land at Sioux Falls at that time, but the high waters there also meant high waters in here, and we were not able to use the airport, which is not merely a municipal airport today, but is also the headquarters of the South Dakota Air National Guard, and obviously an air facility of considerable general and public interest.

Senator BUSH. Thank you very much, Colonel. Does that conclude your presentation?

Senator CASE. I would like to introduce in the record a letter from General Itschner, dated July 20, 1954, primarily for the purpose of the fact that it states it has assurances from the city of Sioux Falls that they will undertake whatever work on highway relocation and local costs that the State does not assume.

Senator BUSH. Without objection that will go in the record at this point.

(The letter referred to is as follows:)

DEPARTMENT OF THE ARMY,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, D. C., July 20, 1954.

Hon. FRANCIS CASE,
United States Senate, Washington, D. C.

DEAR SENATOR CASE: Reference is made to your letters to the Chief of Engineers dated June 29, and July 3, 1954, concerning the flood-control project at Sioux Falls, S. Dak., recommended in our report on the Big Sioux River and tributaries, Iowa and South Dakota.

In your letter of June 29, you ask certain questions about several stipulations which the State of South Dakota has made in its comments on the report. The following answers are in response to your specific questions. The conditions imposed by the State do not impair the feasibility of the project nor do they interfere with the submission of a favorable recommendation to the Congress. Through conferences with local interests, our field offices have been given to understand that the city of Sioux Falls and Minnehaha County will undertake whatever work the State will not assume. Specifically, the raising of State Route 38 between United States Highway 77 and the railroad crossing west of the Sioux River Bridge on State Route 38, if not undertaken by the State, will be undertaken by local interests. With respect to the State's comments on responsibility for damages and for maintenance and operation, it is understood that these will also be assumed by local interests.

With respect to your question concerning the absence of flood-control works presenting a threat to either of the highways or to other roads maintained by the State highway commission, State Route 38A is subject to flooding over a major portion of its length between United States Highway 77 and the vicinity of the railroad crossing west of the Sioux River. In addition, United States Highway 77 at North Drive in Sioux Falls is vulnerable to attack during major floods if the drop structure on existing drainage ditch No. 1 is overtaxed and fails. Such failure is a distinct possibility.

You are correct in your statement that the report will be submitted by formal letter to the Congress, together with the comments of the States and the Federal

agencies, and our views on these comments. The Congress may then take such action as it chooses upon the recommendations in the report and the accompanying comments.

With respect to your letter of July 3, we have received the comments of the Department of Agriculture, which point out that the incremental benefits of the recommended plan, in contrast to the lesser degree of protection originally proposed, are less than the incremental costs. This matter has been given full consideration during the preparation of the report and in its subsequent review in this office. We believe that we are fully justified in recommending the larger plan because of the possibility of loss of life and damage which may occur in an urban area from great floods. In addition there are many intangibles, such as the possibility of epidemics and major disruption of the economy, which cannot be evaluated in monetary terms.

With respect to your question concerning other comments, all have now been received except those from the Department of the Interior and the States of Minnesota and Iowa. In view of your desire to have action expedited on this report, it is being forwarded immediately to the Bureau of the Budget for its review in accordance with customary practice, together with copies of the comments received to date and our replies. The Bureau of the Budget is being informed that the missing comments will be supplied as soon as they are received in this office.

You can be sure that we are taking every possible action within our power to expedite the processing of this report so that it may reach the Congress as soon as possible.

Sincerely yours,

E. C. ITSCHNER,
Brigadier General, United States Army,
Assistant Chief of Engineers for Civil Works.

Senator CASE. Mr. Chairman, that completes the Sioux Falls project. There are three minor things in connection with the bill which I would like to mention when we go into executive session. One of them is the relocation of the town of Pollock, which is being inundated by the Oahe Dam in the chain of dams on the Missouri River. I wonder if while the engineers are here I should not ask them about that. I see General Itschner is nodding in response to that.

General ITSCHNER. I will ask Colonel Whipple to answer on that.

Colonel WHIPPLE. Oahe is one of the largest reservoirs in the comprehensive plan for the Missouri River Basin with a 23 million acre-foot reservoir, which will cost $340 million. About 10 percent of the funds for its completion have been appropriated.

Pollock is a small town which will have to be relocated in connection with the construction of the reservoir. It is a small farming community and has a grain elevator which is the principal commercial facility there.

The water and sewage facilities provided by the inhabitants of this community at the present time are entirely or almost entirely individual. The people get their water supply from individual wells and they have tile drains and septic tanks predominantly for their sewage-disposal activities.

In the acquisition of the townsite the individual people will be compensated for the appraised valuation of their individual water and sewage facilities. As far as the sewage facilities are concerned, the funds will be as much as should and are normally paid as compensation for similar cases. In the case of the water supply there is a special situation. The wells at the present time are only required to be about 25 feet deep. In the new location it will be necessary for the wells to be approximately 200 feet deep. The only water-bearing stratum we know of is at that depth.

So as far as our normal practices and procedures under the law are concerned, we feel we can compensate them for the value of their individual sewage facilities, but cannot fully compensate them or compensate them at all for the additional costs of the wells at the new location. Therefore, as far as the water supply is concerned at least, we have a great deal of sympathy with the situation which Senator Case outlined and feel that something should in equity be done to provide toward a water supply an amount not in excess of the cost that would be required for these people to drill their wells in a new location.

However, we feel that cost would be a great deal less than $250,000, and we cannot find any way to justify contributing toward the municipal sewage-disposal system for this community any more than we can for any other community we are required to relocate, or property we are required to relocate in other cases.

Senator BUSH. Thank you.

Senator CASE. Mr. Chairman, I have introduced S. 3694 on July 1, for myself and my colleague, Senator Mundt. The text of that bill is what I should like to see incorporated in the omnibus flood-control bill. It would provide for the authority to provide adequate water supply and sewage facilities at a cost not to exceed $250,000. If that amount is more than is needed, so much the better. But I would like to say this to supplement what the colonel said.

The town of Pollock is near the Missouri River. As I pointed out, in the basin nearer the river the water table is nearer to the surface of the ground. The people have been able to get water at 25 to 30 feet. The town has to be moved out of the bed of this lake and it is difficult for anyone to conceive what this lake is. It will be 200 miles long, extending from Pierre in the central part of South Dakota to Bismarck, N. Dak., in the central part of North Dakota. It will have the largest capacity of reservoir storage of any lake on the Missouri River—23 million acre-feet plus. It completely floods out this town.

This whole comprehensive plan was authorized for the benefit of the cities like Sioux City and Omaha and the rich agricultural lands downstream clear from Sioux City to Omaha to Kansas City and on to St. Louis.

These people in this little town of four to five hundred people have since 1944 known that their town had to be abandoned, and they have not been able to sell any property. You or I would not, and neither would they feel like putting any improvements on their property. The war was on from 1941 to 1945. So obviously for the last 15 years there has not been any possibility of developing a sewage system because of the prospect that the town is going to be flooded out. This project was authorized in 1944 and the dam has been under construction for several years.

These people have not been able to plan progressively for their town as much as they wanted to. I think the fact that they have to relocate their homes and churches and cemeteries and all of the facilities that have come with the town, and the depression that the town suffered in these 15 years of deferment of any plans for progress, would be ample justification for including the relatively small amount that would be necessary to establish a modern sewage facility system, along with a water system, when the amount is so small compared with the magnitude of a $340 million project.

Senator BUSH. Thank you, Senator. Does that conclude your comments on that?

Senator CASE. Yes, and I thank the colonel.

(S. 3694 and the report of Board of Engineers on the project are as follows:)

[S. 3694, 83d Cong., 2d sess.]

A BILL To modify the comprehensive plans for flood control in the Missouri River Basin to provide for the inclusion in such plans of adequate water supply and sewage facilities at Pollock, South Dakota, to replace the facilities located in such town which are to be abandoned as a result of the construction of the Oahe Dam and Reservoir

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the general comprehensive plans for flood control and other purposes in the Missouri River Basin set forth in House Document 475 and Senate Document 191, as revised and coordinated by Senate Document 247, Seventy-eighth Congress, second session, approved in the Flood Control Act of December 22, 1944, are hereby modified to include the payment by the Corps of Engineers for construction or provision of adequate water supply and sewage facilities in the new relocated municipality of Pollock, South Dakota, at a cost not to exceed $250,000, which is to compensate for the acquisition of and to replace facilities in the town which are located within areas which have been or will be acquired by the United States because of the construction of the Oahe Dam and Reservoir project in the basin.

BIG SIOUX RIVER AND ITS TRIBUTARIES, IOWA AND SOUTH DAKOTA

(Report of Board of Engineers for Rivers and Harbors, Mar. 15, 1954)

Location: Rises in northeastern South Dakota, flows southward to its confluence with the Missouri River just above Sioux City, Iowa.

Report authorized by: Committee on Flood Control, House of Representatives, resolution adopted March 20, 1944.

Existing project: No existing Federal flood-control project. A harbor project on the Big Sioux River just above its mouth, authorized as part of the Missouri River navigation project, has not yet been constructed. Local interests at various places have constructed levees and channel improvements mostly of minor scope with negligible effect on flood flows.

Plan of recommended improvement: Flood protection for Sioux Falls, S. Dak., by means of channel improvement, levees, and a diversion of a major part of Big Sioux River flood flows to bypass most of the city.

Estimated cost:

As of April 1953:	
Federal	$3, 430, 000
Non-Federal	514, 000
Total	3, 944, 000

Local cooperation: The usual assurances required.

Project economics:

	Report
Annual charges:	
Federal	$121, 000
Non-Federal	31, 100
Total	152, 100
Annual benefits: Flood control	176, 400
Benefit-cost ratio	1. 16

TACOMA HARBOR, WASH.

Senator BUSH. We would like next to take up the Tacoma Harbor proposition.

Senator Magnuson is here.

STATEMENT OF HON. WARREN G. MAGNUSON, UNITED STATES SENATOR FROM WASHINGTON

Senator MAGNUSON. Mr. Chairman, I have a statement here which is very short. I have with me a member of the Tacoma Port Division and General Itschner is very familiar with this project over a long period of time. It will not take long for me to read this.

Mr. Chairman, we appear to urge authorization of the Review Report on Wapato (Port Industrial) Waterway, Tacoma Harbor, Wash. This constitutes merely a modification and extension of an existing authorized project.

The review report finds a high benefit-to-cost ratio. The Seattle district and Portland division engineers strongly endorse the project.

The dredging of the Wapato Waterway was authorized by the Congress in the Rivers and Harbors Act of March 2, 1945. On July 18 of that year the House Rivers and Harbors Committee passed a resolution reading, in part, as follows:

> That the Board of Engineers for Rivers and Harbors be, and is hereby, requested to review the reports on Tacoma Harbor, Wash. * * * with the view to determining whether modification of the existing project for Wapato Waterway is advisable at this time.

Pursuant to this authority and directive, the Corps of Engineers has reviewed the previous report and previous authorization and the district and division engineers recommend the modification and extension of the project. The estimated cost of the dredging is $634,200.

Now, Mr. Chairman, the report of the district and division engineers did not reach Washington, D. C., in time to permit inclusion of this project on the agenda of the Rivers and Harbors Board, which held its last meeting on June 11 of this year.

This project is so vital, however, that we are urging your committee to authorize it in this bill.

We believe there is ample justification for the committee to act. In all probability there will not be another rivers and harbors bill for at least 2 years. Such a delay in authorization of this waterway would be nothing short of disastrous.

Here are some of the facts to support that statement.

The Washington Processing Co. and the Pacific Oil Refining Co. constitute a group organized to construct a refinery in Tacoma, Wash. This group has purchased an industrial site on the waterway under discussion. The location is ideal and the associated companies intend to proceed with construction immediately they are assured that the dredging of the Port Industrial (Wapato) Waterway will go forward.

This will bring to Tacoma a plant investment of $10 million in the refinery along. Satellite or associated plants will mean an additional investment of approximately $5 million initially.

To demonstrate the defense relationship of this waterway I call the committee's attention to the fact that the Pacific Oil Refining Co. and its associates now hold certificate of necessity TA–NC–24054—issued to the company by the Office of Defense Mobilization.

In addition, the company has applied for approval of an amendment to this certificate covering an alkylation facility. This alkylation unit will enable the company to produce high octane aviation gasoline.

I am sure the committee members are aware that the plant capacity for aviation gasoline in the Nation is still substantially below requirements. The Defense Department and Office of Defense Mobilization are vitally interested both in the refinery and in the facilities for manufacturing aviation gasoline.

I might say there that this will be the only one north of Los Angeles for this high octane gasoline.

I have already supplied the chairman of this committee with a letter dated June 7 and signed by Brig. Gen. W. W. White, Staff Director of the Petroleum Logistics Division of the Defense Department.

In part, General White states:

> In this connection, the Department of Defense is vitally interested in the construction of alkylation facilities in the Pacific Northwest area, since our logistics studies have clearly demonstrated the need for such facilities in this area. * * *
>
> For your further information we wish to advise that the Department of Defense, through its procurement agency, the Armed Services Petroleum Purchasing Agency, has available a contract mechanism whereby Government offers financial inducements to those companies that are interested in the expansion of alkylation producing facilities.

This quotation from General White's letter demonstrates two things:

First, the urgent need for alkylation facilities in the Northwest; and,

Second, the fact that the Department considers additional capacity so important that Government funds are available on a loan basis to finance construction of such facilities.

The refinery to be located on the port industrial waterway will have a capacity of 10,000 barrels a day. The alkylation unit in connection therewith will have a capacity of 1,000 barrels per day of high octane aviation gasoline.

This latter represents one-sixth of the additional capacity nationwide deemed by the Department of Defense and the Office of Defense Mobilization to be necessary to meet the requirements of national defense.

The Congress itself considered the alkylation program so important that we appropriated $83 million to be used for loans to finance such facilities.

The alkylation unit scheduled in conjunction with the Tacoma refinery will be the only one in the Northwest and, in fact, the only one north of the Los Angeles Basin.

I submit a copy of General White's June 7 letter for the record, together with a copy of a letter I received only today from General White—reiterating and reemphasizing the interest of the Defense Department in this waterway—interest prompted by the reference I have already made to the refining and manufacturing of high ocatne aviation gasoline, which will be located on the waterway.

There is another set of facts which make this project of extreme importance to Tacoma. That city has been classified as a group IV unemployment area. This means that the community is experiencing its own private recession. Construction of the waterway and the oil refinery facilities are sorely needed.

At the conclusion of the construction stage, there will be a permanent payroll for Tacoma. The diversification of its economy will go a long way toward solving the present unemployment problem and insuring against a repetition in the future.

I know your time is limited, Mr. Chairman, so I will make only one additional comment. I go back to the statements made at the beginning of these remarks.

This is not a new project. It was authorized by the Congress in March 1945. We are dealing here merely with a review report, which recommends modification and extension of the previous authorization.

Let me quote two sentences from the Department of Army's report on a bill Senator Jackson and I introduced early this session, providing authorization of the additional works.

I quote:

> The principal feature of the modification is the extension of the Wapato Waterway from 11th Street to Lincoln Avenue. * * * The existing project is about 74 percent complete. Dredging of the Port Industrial Waterway to a depth of 30 feet would complete the existing project.

On behalf of Senator Jackson and myself I submit language to modify the existing authorization. It is very brief. I would like to read it to the committee.

(The statement is as follows:)

[H. R. 9859, 83d Cong., 2d sess.]

IN THE SENATE OF THE UNITED STATES

AMENDMENT

Intended to be proposed by Mr. Magnuson to the bill (H. R. 9859) authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes, viz: At the proper place in the bill insert the following:

Tacoma Harbor, Washington; Port Industrial (Wapato) Waterway: House Document Numbered 124, Seventy-sixth Congress, as modified in the report authorized by resolution of July 18, 1945, of House Committee on Rivers and Harbors, at an estimated cost of $634,200;

Senator BUSH. Without objection the letters of General White will be made a part of the record at this point.

(The letters referred to are as follows:)

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington 25, D. C., June 7, 1954.

Re Tacoma Harbor dredging project (Port Industrial Waterway).

Hon. WARREN G. MAGNUSON,
United States Senate.

DEAR SENATOR MAGNUSON: Receipt is acknowledged of your letter of May 26 regarding the subject matter. We note that you state that a refinery group intends to locate a new oil refinery on this waterway provided dredging therefor is assured, and assuming sufficient dredging has been accomplished to provide a fill where some of the company's facilities will be located. We further note that this company has recently advised the Tacoma Port Commission that in addition to the installation of a modern-type basic refinery, it is planning to include an alkylation unit which will then make possible the production of high-octane aviation gasoline.

In this connection the Department of Defense is vitally interested in the construction of alkylation facilities in the Pacific Northwest area, since our logistic studies have clearly demonstrated the need for such facilities in this area. We are confident that if the company's original application to Government for a certificate of necessity is revised to include such additional facilities, favorable consideration will be given thereto by the appropriate governmental agencies.

For your further information we wish to advise that the Department of Defense, through its procurement agency, the Armed Services Petroleum Purchas-

ing Agency, has available a contract mechanism whereby Government offers financial inducements to those companies that are interested in the expansion of alkylation-producing facilities.

We trust this letter satisfactorily answers the questions raised by you regarding the proposed refinery to be constructed in the Tacoma Port area. If any additional information is needed, please do not hesitate to communicate with us again.

Sincerely yours,

W. W. WHITE,
Brigadier General, USAF,
Staff Director, Petroleum Logistics Divison.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington 25, D. C., July 22, 1954.

Re Tacoma Harbor dredging project (Port Industrial Waterway).

Hon. WARREN G. MAGNUSON,
United States Senate.

DEAR SENATOR MAGNUSON: In further reference to my letter of June 7, 1954, the Pacific Oil & Refining Co. advised me, under date of July 13, 1954, that it has requested the Office of Defense Mobilization to amend its presently existing Certificate of Necessity TA–NC–24054 to include an alkylation unit in the interests of national defense.

We are pleased with this development since, as indicated in my previous letter to you, the Department of Defense is vitally interested in the construction of alkylation facilities in the Pacific Northwest area.

It is hoped that the necessary arrangements can be made in connection with the Tacoma Harbor dredging project which, if completed, will enable the Pacific Oil & Refining Co. to proceed with the construction of their refinery.

Sincerely yours,

W. W. WHITE,
Brigadier General, USAF,
Staff Director, Petroleum Logistics Division.

Senator BUSH. Mr. Raymond.

STATEMENT OF MORRIS RAYMOND, PRESIDENT OF THE TACOMA PARK COMMISSION

Mr. RAYMOND. My name is Morris Raymond. I am president of the Tacoma Park Commission.

Senator MAGNUSON. Not only is the high octane gas involved, but the Navy owns about 1,000 feet of this area.

Mr. RAYMOND. That is right. Since the original project was formed in 1945 the people in the Tacoma Park area have spent in the neighborhood of $2 million of our own local funds in preparations for this extension of the waterway and a drawbridge here to take care of oceangoing vessels, with high towers on either side, so that the large oceangoing vessels can proceed through this bridge and also pretty well dredging it to the tune of around $200,000 in this area. There is an electrochemical company——

Senator MAGNUSON. What do they make? The Defense Department is interested in them too.

Mr. RAYMOND. Many, many chemicals that will be concerned with the oil refinery industry as well as many other products in the chemical field. They have a plant in this area now and this is their large plant for an extension.

Senator MAGNUSON. The green is the Navy's.

Mr. RAYMOND. The green section here is your Navy. They occupied better than 1,000 feet of area on the waterfront as it is. The

Stauffer Chemical Co. owns this property and is waiting for the dredging of this waterway further to expand their property.

A large boatbuilding corporation in this area marked in red is ready to expand into a large new boatbuilding factory as soon as this waterway is developed.

This is a large engineering company that has a tremendous value to the Alaska trade once we get this waterway dredged. The oil refinery will no doubt be located in this area marked in the pencil marks here. We are in negotiation with them at this particular moment and they will use this area for their docks and their pipelines will come down across Tacoma Road into their oil area in the large red field, which will consist of their plant locations.

The Marine Manufacturing Co., which will be building a plant in this area consisting of some 16 acres of land has a main product of oil drums and other metal products. There is a roofing company here which has 11½ acres on which they are building a plant at this particular time, and anticipating the oil refinery being built in time to use a part of their product.

The reason for my visit here is that we are in a tough spot in our area. For a period of 5 years we have been gradually getting into a depressed area to the point where for the last 2 years it has been extremely serious—very serious. I will say some 40,000 people out of our 200,000 are in that distressed category today. There is not much that anybody can do about it unless we go into a direct dole. The only answer to our whole problem is getting this waterway dredged, because the moment it is dredged these other industries will start building, and through private enterprise we will put a great many million of dollars into actual labor and construction. I think it is definitely the key to our particular problem.

We urge most sincerely every consideration that can be given in this matter.

Senator MAGNUSON. They have been designated for a long time as a class IV area such as you have in some sections of the country.

Mr. RAYMOND. I have a letter which I would like to put in, Senator. Sometimes public officials are appreciated in their testimony, but when somebody brings in a letter from the ranks of the people, maybe it makes a little better impression.

I have a letter here from the Tacoma Building and Construction Trades Council, which was sent to me on April 21, and I would like to have it inserted in the record.

Senator BUSH. If there is no objection I will incorporate it in the record. It is an endorsement by the trades council of your project. Is that correct?

Mr. RAYMOND. Yes, sir.

Senator BUSH. It will be inserted in the record at this point.

(The letter referred to is as follows:)

TACOMA BUILDING AND CONSTRUCTION TRADES COUNCIL,
Tacoma 3, Wash., April 21, 1954.

Mr. MAURICE RAYMOND,
Commissioner, Port of Tacoma,
Tacoma, Wash.

DEAR MR. RAYMOND: The Tacoma Building and Construction Trades Council is appealing to the port commission to continue your good efforts in expediting the dredging of the Industrial Waterway, for the overall good of the economic life of our community.

We, in labor, are especially interested in the proper and rapid development of this project, from a job opportunity basis both on construction and for industry which will locate in this area.

Perhaps it is well to point out that unemployment is most rampant and visible relief to this problem hinges upon industrial promotion on our tideflats, which will be available only upon completion of this dredging.

It is, therefore, our sincere desire and request for your honorable body to vigorously proceed, at the first possible date, with the dredging, not only for the employment of manpower on this operation but for the reason that we desparately need the earliest possible date for construction of new industry and expansion program.

Some of our local unions have inaugurated steps for a 6-hour workday so that employment may be spread to a broader coverage. Their belief in spreading employment so more people may at least be earning beans, is borne from necssity as many of our workers have exhausted their unemployment compensation benefits. I don't believe any elaborations are necessary to point out just how critical the times are and why we urge your prompt consideration of our request.

If our office or any of the affiliated local unions may be of assistance to the port commissioners, do not hesitate to request the same.

The employment figures on a current basis concerning the construction industry will be forwarded to you within a few days.

Please accept our sincere appreciation for constructive steps which are being inaugurated by our port commissioners and with warm personal regards, I remain,

Respectfully yours,

VERNIE REED, *Director.*

Senator BUSH. General Itschner, we will be glad to hear you on project.

General ITSCHNER. They have covered it so thoroughly that I will just summarize it at this point.

Senator BUSH. Thank you.

General ITSCHNER. The port of Tacoma is located on an arm of Puget Sound, 26 nautical miles south of Seattle, in the State of Washington.

The city of Tacoma is the lumber capital of the Northwest. In 1950 it had a population of 144,000 people, but the surrounding area had a total population with Tacoma of 275,000 people. It has grown slightly since that time.

The commerce in the last year of record, 1952, was about 5,100,000 tons into this port. It is a deep-sea port. There is an authorized project consisting of the improvement to a depth of 30 feet of a number of waterways. One of these waterways is the Wapato Waterway, or as it is now called, the Port Industrial Waterway, which has been the subject of this discussion so far here this morning.

That authorized project is for a depth of 30 feet in the Port Industrial Waterway down to the 11th Street Bridge. The proposed review project would be in addition to the existing project and extend that Port Industrial Waterway a distance of 3,400 feet to Lincoln Avenue. That proposed extension would be 700 feet wide for a Federal project, with an additional 50 feet on each side to be dredged by local interests, and it would be 30 feet deep.

In the course of the past few years the port of Tacoma has spent, as stated by Mr. Raymond, over $2 million of their own funds on the improvement of the harbor, of which something over $1 million has been spent on the water portion of the harbor, that is, in dredging and constructing bulkheads.

Included within that local project has been the construction of a dredged channel from the 11th Street Bridge to Lincoln Avenue. That channel at the present time is 30 feet deep at 11th Street, and

it tapers off to 20 feet deep at Lincoln Avenue. That portion of the work would be encompassed by the Federal project.

As was stated by Senator Magnuson, we have a review report outstanding on this project at this time. We have preliminary copies of that report right here and have had an opportunity to review it. We sent it back to the field for further information and the report is due in Washington on the 1st of August.

Senator CASE. Do I understand then, General Itschner, this has not been reviewed by the Board of Review?

General ITSCHNER. It has not been reviewed by the Board of Engineers for Rivers and Harbors. The staff of the Board has had the report and has studied it, but the report itself has not been heard in a hearing at the Board of Engineers.

Senator CASE. What does the division engineer show as the benefit-cost ratio?

General ITSCHNER. It is very high—2.29 to 1. It is based largely on the proposed construction of the refinery that was mentioned by Senator Magnuson. That refinery will require the shipment into the refinery of 1,350,000 tons of crude oil a year. It is estimated that outgoing shipments in the form of petroleum products by ship will amount to 625,000 tons per year, and by barge 325,000 tons per year. The balance will be shipped by land.

Senator CASE. Will the location of the refinery there have any significance or meaning for our petroleum requirements in Alaska?

General ITSCHNER. It should have a very great significance in that way because it is on an arm of Puget Sound, which is directly connected to the inland passage to Alaska.

Senator CASE. When members of this Public Works Committee were in Alaska a year ago in August, I believe members of the committee did confer with you at that time when you were in that division.

General ITSCHNER. Yes, sir.

Senator CASE. When we were in Alaska we were told one of the great handicaps to economic development in Alaska was the high cost of petroleum products, gasoline in particular if I remember correctly, bearing a cost of 18 cents out of the total price of a gallon of gasoline for the shipment cost from the States. The Government itself, of course, is a very large user through the military installations we have in that area, and I was wondering if any part of this benefit-cost ratio would extend to the Government itself as a purchaser and user of petroleum products in Alaska?

General ITSCHNER. I am sure there would be a considerable possible saving, but the benefit-cost ratio as we have determined it does not include any consideration of the product in Alaska. It is based entirely on savings in the immediate area.

Senator CASE. Thank you.

Senator MAGNUSON. I wanted to point out, Senator Case, what you say here. This is a letter from the Secretary of Defense's Office, and I will read just one paragraph. It says:

> We are pleased with this development since, as indicated in my previous letter to you, the Department of Defense is vitally interested in the construction of alkylation facilities in the Pacific Northwest area.
>
> It is hoped that necessary arrangements can be made in connection with the Tacoma Harbor dredging project which, if completed, will enable the company to construct their refinery because there is nothing north of Los Angeles.

Senator BUSH. Are there any further comments?

(No response.)

Senator BUSH. If not, thank you very much, Senator, and we will proceed with the next item.

Senator MAGNUSON. Thank you.

I want to add for the record that Senator Jackson, who is unavoidably detained, joins with me in this project, as well as all members of the Washington delegation.

Senator BUSH. And you would like to insert it in the record?

Senator MAGNUSON. Yes.

Senator BUSH. Without objection, the document on this project will be placed in the record at this point.

(The document referred to is as follows:)

TACOMA HARBOR, WASH. (PORT INDUSTRIAL WATERWAY)

Location: Tacoma Harbor is in northwestern Washington at the head of Commencement Bay, an arm of Puget Sound, 26 nautical miles south of Seattle.

Report authorized by: River and Harbor Committee resolution, July 18, 1945.

Existing project: Provides for waterways and channels of varied depths and widths, including dredging to a depth of 30 feet of an area in the Wapato Waterway (renamed Port Industrial Waterway) not nearer than 50 feet from established pierhead lines or lateral limits of the waterway nor 100 feet from the northerly line of East 11th Street. Existing project is about 74 percent complete; dredging of Port Industrial Waterway to a depth of 30 feet would complete the existing project.

Plan of recommended improvement: Modification of the existing project to provide for dredging to a depth of 30 feet below mean lower low water the main channel in Port Industrial (Wapato) Waterway extending from deep water in Commencement Bay to not nearer than 100 feet from the northwest line of Lincoln Avenue, and over widths not nearer than 50 feet from established pierhead lines or lateral limits of the waterway, except through East 11th Street Bridge where a channel width of 150 feet shall be provided.

Estimated cost:

March 1954 prices: [1]	
Federal	$634,200
Non-Federal	[2] 203,030
Total	837,230

[1] Includes cost of the authorized project not completed and the recommended extension.
[2] Includes cash contribution on equivalent work of $26,330.

Local cooperation: Furnish lands, easements, disposal areas, and rights-of-way; hold and save United States free from damages; accomplish alterations to utilities; provide and maintain suitable terminal and transfer facilities; bear the additional cost of disposing dredged material from the Federal project as fill on land, such additional cost amounting to about 4 percent of the total dredging cost, or $26,330 at present prices.

Project economics:

Annual charges:	
Federal:	
Interest and amortization	$22,360
Maintenance	14,000
Non-Federal	12,160
Total	48,520
Annual benefits:	
Transportation savings	64,500
Ship repair and construction savings	20,000
Land enhancement	26,400
Total	110,900
Benefit-cost ratio	2.29

STATEMENT OF HON. THOR C. TOLLEFSON, A MEMBER OF CONGRESS FROM THE SIXTH DISTRICT OF WASHINGTON

Mr. TOLLEFSON. Mr. Chairman, I appreciate the opportunity of appearing before the committee in behalf of a project that is of considerable interest to the city of Tacoma, which is my home. I refer to the dredging of the port of Tacoma industrial waterway. The dredging would open up the entire length of the waterway to ocean-going vessels and would make available the full utilization of additional land area for industries connected with national-defense activities.

Under the River and Harbor Act of 1945, authorization was given the Army engineers to dredge a part of the waterway to a depth of 30 feet an area not nearer than 50 feet from established pierhead lines or lateral limits of the waterway, nor 100 feet from the northerly line of East 11th Street, subject to certain local contribution. For reasons then existing, the port of Tacoma officials did not see its way clear to make that contribution. The project is still being considered by the Army engineers.

The port of Tacoma plans call for an extension of the waterway south of East 11th Street to Lincoln Avenue

In pursuance of those plans, the city has constructed a bascule concrete and steel bridge across the waterway at East 11th Street at a cost of $1,500,000. This will permit the passage of ships as far as Lincoln Avenue provided the channel is dredged deep enough and wide enough.

The port of Tacoma in 1952 expended $241,000 for preliminary dredging of the channel between East 11th Street and Lincoln Avenue. However, to accommodate ocean traffic the channel must be dredged to a depth of 30 feet at mean low water and to a width of about 800 feet for a distance of approximately 3,000 feet between the 2 streets.

This project is an urgent one so far as the city of Tacoma is concerned. As a matter of fact, it is so urgent that the port of Tacoma contracted for some preliminary dredging to be done by a private concern without first having the assurance of contribution by the Army engineers or Congress. This work has now been completed. It is the sincere hope of the port officials and of our citizens that you will give the project the same consideration it would be entitled to receive had not the dredging contract been entered into. They believed the matter so urgent that they felt compelled to proceed with it without delay.

WILMINGTON HARBOR, N. C.

Senator BUSH. Senator Ervin of North Carolina is here, so if there is no objection we will take up the Wilmington Harbor project.

STATEMENT OF HON. SAM J. ERVIN, UNITED STATES SENATOR FROM THE STATE OF NORTH CAROLINA

Senator ERVIN. Mr. Chairman, my predecessor, Senator Hoey, had introduced a Senate bill, 2415, which is before this committee.

This bill looked to the authorization of reimbursement to the State of North Carolina of a sum not to exceed $65,000 on account of expenditures made by the North Carolina Ports Authority in deepening

the channel at Wilmington, N. C. I am asking the committee instead of making a report on the Senate bill, to incorporate an amendment in the omnibus bill to take care of this situation.

The chief clerk of the committee made an excellent summary of the evidence in the files and I will read that because it is better than anything I can say and it gives the picture very accurately.

The purpose of this amendment is to permit the Chief of Engineers to reimburse the State of North Carolina in an amount not to exceed $65,000 for costs incurred in widening the transition channel at the lower end of the anchorage basin.

Modification of the existing project for Wilmington Harbor, N. C., was authorized by the River and Harbor Act approved May 17, 1950. The authorized project provides for a channel 35 feet deep and 400 feet wide through the ocean bar from the Atlantic Ocean into Cape Fear River, and 34 feet deep and 400 feet wide up Cape Fear River to the upper end of the anchorage basin at Wilmington, including the anchorage basin and increased width at the bends. The total estimated cost is $2,093,700. No funds have been appropriated for this work.

During the fall of 1951, the North Carolina Ports Authority dredged an area in the transition channel and within the wider channel limits of the Federal project, to a depth of 32 feet, to facilitate operation of the port and turning basin and increase the value of Wilmington Harbor to general commerce.

The work performed is a part of the Federal project and would have to be done as a part of that project when its construction is undertaken. The work was accomplished subsequent to the Federal authorization, and reimbursement to the State could be made when appropriations for the project become available.

The omnibus bill, H. R. 9859, contains similar provisions for one other project, and similar provisions have been enacted in the past.

The Department of the Army and the Bureau of the Budget have no objection to enactment of this legislation.

The existing modified project for Wilmington Harbor, N. C., authorized by the River and Harbor Act approved May 17, 1950, in accordance with the recommendations of the Chief of Engineers in House Document No. 87, 81st Congress, is hereby further modified to provide that the Secretary of the Army shall reimburse local interests for such work as they may have done upon widening of the transition channel at the lower end of the anchorage basin, subsequent to May 17, 1950, insofar as the same shall be approved by the Chief of Engineers and found to have been done in accordance with the project modification adopted in said act, provided that such payment shall not exceed the sum of $65,000.

I would like to add to this statement these facts. The State of North Carolina has spent several millions of dollars in developing docks and port facilities at Wilmington and also at Morehead City. This work would in all likelihood have been done by the Federal Government by this time had it not been for the situation that has grown as a result of the Korean war. These facilities were there and it was virtually impossible to use them without proceeding with this particular dredging which is mentioned in this report. I think it is in harmony with the Federal project and it was necessary to accom-

plish the use of the facilities which the State put there, and I think it is entirely meritorious.

The proposed amendment provides that the work is to be reviewed by the Chief of Engineers and reimbursement to be made only to the extent of the actual expenditures which would have been in harmony with the Federal project, and it provides for a limit not to exceed $65,000.

Thank you very much.

Senator BUSH. Thank you, Senator.

If there is no objection, we will now take up the Presque Isle project, in Erie, Pa.

PRESQUE ISLE, ERIE, PA.

Senator BUSH. Mr. Dwyer.

Is there a report on this, General Itschner?

General ITSCHNER. Colonel Allen will handle this matter.

Colonel ALLEN. This report, Mr. Chairman, is a beach erosion control report, which has been included in the House omnibus bill. It was reported to them and they acted favorably on the bill and included it in accordance with the provisions of the report.

Senator BUSH. It is in there?

Colonel ALLEN. Yes.

(The report referred to is as follows:)

PRESQUE ISLE PENINSULA, ERIE, PA.—BEACH EROSION CONTROL STUDY

(H. Doc. 231, 83d Cong., 1st sess.)

Location: On south shore of Lake Erie at Erie, Pa., about 78 miles southwest of Buffalo, N. Y.

Report authorized by: Section 2, River and Harbor Act, July 3, 1930, as amended and supplemented.

Existing project: There is no Federal beach erosion control project for Presque Isle Peninsula.

Plan of recommended improvement: Artificial placement of 1,500,000 cubic yards of sand fill; construction of seawall, bulkhead, and a groin system and placement of 1 million cubic yards of stockpile sand as a feeder beach; removal of existing jetty and bulkhead.

Estimated cost:

	Federal	Non-Federal	Total
Project document (January 1952)	$1,753,000	$3,506,000	$5,259,000
Current (July 1953)	2,006,000	4,012,000	6,018,000

Local cooperation: Adopt the plan; submit plan to Chief of Engineers for approval prior to commencement of work; provide all lands, etc.; maintain project after completion; hold and save United States free from damages; not permit pollution; continue public ownership.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$217,600	$212,250
Maintenance	92,400	101,500
Total	310,000	313,750
Annual benefits: Recreational and damages prevented	330,000	371,000
Benefit-cost ratio	1.1	1.18

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Remarks: Erie has a population of more than 130,000. Attendance on the peninsula totals over 1,500,000 annually from western New York, Pennsylvania, and eastern Ohio. Pennsylvania has already expended several hundred thousands of dollars for protection with work in accordance with the recommended plan and has appropriated in addition $2,500,000 for the plan. The State owns practically the entire peninsula which is a park comprising 3,200 acres.

Senator BUSH. Mr. Dwyer. Will you state your name and connection, please?

STATEMENT OF JOHN R. DWYER, CHAIRMAN OF THE SAVE OUR PENINSULA COMMITTEE OF PENNSYLVANIA

Mr. DWYER. John R. Dwyer. I am chairman of the Save Our Peninsula Committee of Pennsylvania, which is a group of 5,600 people who have organized to try to save the Presque Isle Peninsula.

The project has been considered as a beach erosion project, and indeed it is. The peninsula, however, serves the purpose of forming the outer wall of the Erie Harbor, so that in addition to a beach it is also an essential part of Erie Harbor.

The State of Pennsylvania has on hand $2,632,000, looking to a cooperative effort between the State and the Federal Government to construct works to preserve the peninsula. At the time that appropriation was made by the State the estimated cost as far as we knew was $5,200,000. Since that time the cost has been reestimated to be slightly over $6 million.

As a result of that the figure of $2,006,000 has been recommended by the Public Works Committee of the House.

As a beach-erosion project that would be one-third of the total amount. It does seem since the peninsula is a public beach, that is logical; but it also seems it should be given consideration as a harbor project as well. Because of that our appeal is to this committee to give consideration to matching the State funds, if that is possible, rather than considering it purely as a beach project on a one-third basis by the Federal Government and two-thirds by the State government.

That is our appeal, to see if that could be given consideration.

Senator BUSH. Will you comment on it, Colonel?

Colonel ALLEN. The project Mr. Dwyer mentions is a project to protect Presque Isle Peninsula, which you see extending here. The project structures are shown in green and were fully discussed at the hearings before the House Public Works Committee.

In determining the Federal share of the beach-erosion project, which was the result of a cooperative study between the Federal Government and local agencies, it was felt that the provisions of Public Law 727 of the 79th Congress, which set up Federal participation in beach erosion, which we discussed very briefly yesterday, should be applied strictly. That resulted in a one-third-two-thirds cost allocation because the property in question was all public property.

That provided for a Federal contribution of $2,006,000, and the two-thirds share by local interests of $4,012,000.

The question Mr. Dwyer raises is the degree of protection that the peninsula offers to the navigation project some 4 or 5 miles distant at Erie Harbor. It was felt in the report of the field, and supported

by the report of the Chief of Engineers, that this would have to be treated strictly as a beach erosion project and could not be related to the navigation project, insofar as it resulted in an increased Federal share and the applicability of Public Law 727 was interpreted strictly in that respect.

Senator BUSH. How would this compare with the project we were looking at yesterday in Oregon at Tillamook Bay?

Colonel ALLEN. It is quite different, Mr. Chairman. The tidal range in Tillamook is about 7½ feet at mean tide range, which extends up to 12 feet. If this would be the Tillamook situation, there would be a constant ebb and flow of the tide through that breach, and a consequent shoaling of the area.

Of course, on the Great Lakes we do not have that problem. It was felt that the breaching of this peninsula, which would have been a result of storm action rather than a continuing action as a result of tides, was not parallel to the situation we discussed yesterday.

Senator BUSH. Thank you very much, Colonel. Does that conclude your statement?

Mr. DWYER. Could I point out something here?

Senator BUSH. Yes.

Mr. DWYER. Of course, this is the entrance to the harbor. Most of the shipping comes from the west and goes to the west. The action of the lake and the currents in the lake is to move the sand along this peninsula and redeposit it out here. This particular section here has to be dredged frequently by the Federal Government. If this protective work is put here the idea is to hold the sand there instead of letting it erode around into the channel where the ships go.

Without this peninsula there is no harbor here at all. Is it not logical, then, to consider that the peninsula is a harbor as well as a beach project?

I just ask that question, and if you can possibly consider it as such, I shall appreciate it very much.

Thank you very much.

Senator BUSH. Thank you.

General, we have a letter here from the Acting Secretary of the Army, John Slezak, addressed to the chairman of the full committee, Mr. Martin. He says:

> There is inclosed herewith a draft of legislation to modify the Flood Control Act of 1946 to provide for the reservation of 12,000 acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood, Tex., and adjacent military installations. The submission of this legislation is in accordance with procedures approved by the Secretary of Defense.

Do you wish to comment on that at this time?

General ITSCHNER. I would like to ask Colonel Starbird to do that.

Colonel STARBIRD. We are completing the Belton project authorized under the 1946 act. The reservoir is about a half a million acre-feet of storage of which around 125,000 acre-feet of reservoir space is for water conservation. The remaining water in the present authorization is for flood control.

Fort Hood is one of our major military camps. It is located just downstream from Belton. Fort Hood has made application through the Secretary of the Army and through the Corps of Engineers to the State of Texas for the allocation of 12,000 acre-feet of storage for use to provide its own water supply. The Board of Water Engineers for

the State of Texas indicated that such allocation of storage is acceptable.

The only purpose of this bill is to avoid an interchange of money between departments, with the paperwork involved. This language would permit the Department of Defense to use that 12,000 acre-feet of storage without reimbursement from the Department of Defense for such use.

Senator BUSH. Is there any further comment?

(No response.)

Senator BUSH. The letter from Mr. Slezak will be inserted at this point.

(The letter referred to is as follows:)

DEPARTMENT OF THE ARMY,
July 22, 1954.

Hon. EDWARD MARTIN,
Chairman, Committee on Public Works,
United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: There is enclosed herewith a draft of legislation to modify the Flood Control Act of 1946 to provide for the reservation of 12,000 acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood, Tex., and adjacent military installations. The submission of this legislation is in accordance with procedures approved by the Secretary of Defense.

The purpose of the proposed legislation is to provide the Secretary of the Army authority to make available to Fort Hood 12,000 acre-feet of storage space in the Belton Reservoir project on the Leon River, Tex., without the added expense of transferring funds. The project is being constructed with funds appropriated for civil works activities of the Army.

The Belton Dam and Reservoir project is nearing completion and is being built by the Corps of Engineers under authority contained in the Flood Control Act of 1946, which authorized the project for flood control and conservation purposes with a proviso reading as follows: "Of the conservation storage capacity provided by such reservoir, not to exceed 45,000 acre-feet of such capacity shall be available for irrigation purposes in the Leon, Lampasas, and Little River Valleys." The project, presently estimated to cost $14,300,000, will provide a controlled storage capacity of 1,097,600 acre-feet, including 887,000 for flood control, 125,700 for conservation and 84,900 for sedimentation storage. Of the 125,700 acre-feet of conservation storage space, 113,700 will be made available to the Brazos River Authority in accordance with authority contained in section 6 of the 1944 Flood Control Act, and the Secretary of the Army has tentatively reserved 12,000 acre-feet of storage space for Fort Hood and adjacett military installations.

After a thorough study of the water supply situation at Fort Hood by the district engineer, Fort Worth district, it was determined that to assure adequate amounts of water for present and future operations of Fort Hood it would be advisable to obtain 12,000 acre-feet of water supply storage space. It was found that Belton Reservoir would be the most dependable source of water supply both as to quantity and quality. In this connection, the Department of the Army is now in the process of constructing intake facilities, a treatment plant, and transmission line to treat and deliver water from the Belton Reservoir to the Fort Hood distribution system. In anticipation of the transfer of 12,000 acre-feet of storage space at Fort Hood, the district engineer, Fort Worth, is making application to the Board of Water Engineers of the State of Texas for the right to impound 12,000 acre-feet of water from the Leon River, Tex. Since the Chief of Engineers is without authority to transfer 12,000 acre-feet of storage space to the Fourth Army without reimbursement, it is recommended that the proposed legislation be enacted into law.

The Bureau of the Budget advises that there is no objection to the submission of the proposed legislation.

Sincerely yo .rs,

JOHN SLEZAK,
Acting Secretary of the Army.

A BILL

LEGISLATION PROPOSED FOR INCLUSION IN THE RIVER AND HARBOR AND FLOOD CONTROL OMNIBUS BILL

SECTION ———

Brazos River Basin: The project for the Belton Reservoir, Leon River, Texas, authorized by the Flood Control Act of 1946, is hereby modified to provide for the reservation, without reimbursement, of 12,000 acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood and adjacent military installations.

Colonel STARBIRD. I would like to add one other comment in connection with the Fort Hood project. We were informed yesterday by telephone that the Bureau of the Budget had cleared the submission of that language to you.

CONWAY COUNTY DRAINAGE AND LEVEE DISTRICT NO. 1, ARKANSAS RIVER

Senator BUSH. Congressman Hays of Arkansas is here to discuss his projects. Perhaps the Engineers could proceed with the introduction of the subject first.

Colonel STARBIRD. The Conway Drainage District project is one located on the south bank of the Arkansas River at about mile 250 above the confluence of the Arkansas with the Mississippi. It is a small project. It is a project for the protection of an agricultural area. The area to be protected is shown on a larger scale on this map.

In this locality the river itself is around 1,000 feet wide. The flood plain has a width of about 4 miles. It is a rich alluvial flood plain.

In the Conway County Drainage and Levee District No. 1, there are about 1,500 acres of land involved. Those 1,500 acres have been given a measure of protection by local interests through their construction of about 2 miles of levee located generally on the downstream end of the project. However, even with that measure of protection, the land is overflowed on the average of once every 4 years.

We have studied the feasibility of developing a project to give the necessary protection to the area. The plan recommended by the Chief of Engineers calls for the construction of about 2½ miles of levee incorporating the portion of levee already constructed by local interests. Local interests would improve a drainage ditch leading to a drainage structure which would be constructed by the Chief of Engineers.

The overall project would have a cost to the Federal Government of $249,000. It would have a cost to local interests of approximately $25,000. At the time we examined the project in 1950 it was estimated to have a benefit-cost ratio of 1.03 to 1. We have reexamined it recently and there has been no substantial change in that benefit-cost ratio. It is about 1.01 to 1 at the present time.

You will note from the map that certain other areas across the river and down the river have been given protection through the construction of levees.

The report you have before you was reviewed by the State of Arkansas, who recommended its approval. It was reviewed by the Departments of Interior and Agriculture, neither of whom had any objections to the report.

The Bureau of the Budget reviewed the report and pointed out that the benefit-cost ratio was marginal and questioned some of the figures we had used in connection with the computation of the benefits. They forwarded the report in 1951, stating it would not be in line with the President's program, in view of the marginal benefit-cost ratio, but if the project was constructed there could be no commitment as to when appropriations on the bill would be made.

Senator BUSH. Thank you.

Congressman Hays, would you care to comment on this situation briefly? We are trying to confine our remarks to a very brief 5 to 10 minutes.

STATEMENT OF HON. BROOKS HAYS, A MEMBER OF CONGRESS FROM THE FIFTH CONGRESSIONAL DISTRICT OF ARKANSAS

Mr. HAYS. Mr. Chairman, I shall certainly not take 5 minutes. I hope not. If I do, I trust the Chair will call me down.

I appreciate the pressures you are under.

I would like to say at the outset I am authorized by Senator McClellan to urge the approval of the Corps of Engineers recommendations and to embrace this project in the bill. He would be here except for the circumstances that the chairman is familiar with, namely, that his primary is next Tuesday and he is necessarily absent from the city. But he is interested and I speak with the authority of the Senator in what I am saying about the importance of this project.

The Corps of Engineers has thoroughly examined this project and Colonel Starbird can answer any questions as to details. I feel what I am justified in saying to the chairman is that there are certain considerations that lie outside of statistics in this.

The only real good land we have in the district which I represent is in the Arkansas Valley. It is a narrow valley and when you come down to the considerations of value you see it is just worth what it costs to make an improvement of that kind. This is the good land of our area.

The Federal aspect of the problem is obvious because the water that overflows it once in 4 years is not the water that falls in Arkansas, but the water that falls in Oklahoma, and Kansas, and Colorado, and in other States. Of course, to some extent there is an Arkansas rainfall which is involved, but the Arkansas River—and you see it is not far from the mouth of the valley—the Arkansas River at this point carries the water of about seven States. So the Federal aspect is apparent and I urge the committee to take into account these factors, that this land is vital to our economy and the failure to protect it would have a terrific impact on it.

While the area is small, in principle the point I am making is just as big as if it were a large area.

So, Mr. Chairman, it seems to me that the Corps of Engineers is right in its recommendations, and I will appreciate your favorable action.

Senator BUSH. Thank you very much, Congressman.

Without objection, we will insert the brief analysis in the record on this project.

(The document referred to is as follows:)

ARKANSAS RIVER, CONWAY COUNTY DRAINAGE AND LEVEE DISTRICT NO. 1, ARKANSAS

(H. Doc. 167, 82d Cong., 1st sess.)

Location: Conway County Drainage and Levee District No. 1 is located in central Arkansas about 6 miles southwest of Morrilton, Ark. It extends along the right bank of the Arkansas River between river miles 227.3 and 225.5.

Report authorized by: Resolution of the Committee on Public Works of the House of Representatives adopted April 20, 1948.

Existing project: There is no existing Federal project to provide local flood protection for this locality. However, reservoirs to be constructed under the multiple-purpose plan for the Arkansas Basin authorized by the Flood Control Act of 1938 and the River and Harbor Act of 1946, and other acts, will reduce flood flows in the area.

Plan of recommended improvement: Provides for construction of a levee along the right bank of the Arkansas River from mile 227.3 to mile 225.5, together with a drainage structure and a drainage ditch.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$166,600	$14,400	$181,000
Current	230,600	18,400	249,000

Local cooperation: Provide all lands, easements, and rights-of-way; either contribute to the United States the cost of construction of the proposed drainage ditch or undertake its construction at their own expense in accordance with plans of the district engineer; hold and save the United States free from damages; maintain and operate all the works after completion; and make any alterations to existing improvements which may be required because of the construction works.

Project economics:

	Project document	Current
Annual charges	$12,600	$13,900
Annual benefits	$13,000	$14,000
Benefit-cost ratio	1.03	1.01

Comments of the Bureau of the Budget: No objection to transmission of report to Congress. Project not in accord, however, inasmuch as certain assumptions used in the report in evaluating benefits are questionable. States that if project is authorized by the Congress, estimate of construction must be justified in accordance with Presidential directive of 1950.

Remarks: The recommended plan of improvement will protect 1,490 acres of rural land, of which 850 are cultivated against design flood. The Corps of Engineers advises with respect to the adverse comments of the Bureau of the Budget, that if the project is authorized the comments of the Bureau of the Budget will be carefully considered before construction funds are requested.

HOLLA BEND BOTTOM, ARKANSAS RIVER

Senator BUSH. We have another project in your area, Congressman, at Holla Bend Bottom, and will be glad to hear from Colonel Starbird on that.

Colonel STARBIRD. The Holla Bend project is located about 25 miles upstream from the Conway project, which was described just before. The Holla Bend project is on the opposite bank of the river—in other words on the north bank of the river. This map is reversed in its direction. North is actually toward the bottom of the map.

Here the area concerned is approximately 2,000 acres in extent, a very wealthy agricultural area. Here again there has been a measure of protection given by local interests.

I might mention that the river goes over its banks, or it has in the past, about 72 times in 50 years. This measure of protection, therefore, is a noticeable thing. However, that measure of protection still leaves substantial damages.

The recommended plan in this case is for incorporation of the 2½ miles of local work into an improved levee, raising the height 6 to 8 feet. The average height upon completion will be in the neighborhood of 12 feet.

The total estimated cost of this project to the Federal Government would be $335,000. That is a current cost. The cost to local interests is estimated at $23,000.

The benefit-cost ratio of the project at the time of analysis in 1950 was 1.05 to 1. The benefit-cost ratio now is 1.23 to 1.

Comments by the various agencies mentioned in the case of the Conway project are similar to those that were given in this particular project.

Senator BUSH. Would you comment on this, Congressman?

STATEMENT OF HON. BROOKS HAYS, A MEMBER OF CONGRESS FROM THE FIFTH CONGRESSIONAL DISTRICT OF ARKANSAS

Mr. HAYS. Thank you.

Again I speak with Senator McClellan's authority and in his behalf, as well as my own. The two projects, while not related, are in close proximity, and what I have said with reference to the area generally would apply to the Holla Bend project.

I might say, Mr. Chairman, I failed to call your attention to the fact that the local interests already proceeded to expend certain funds you might say in anticipation of the Federal contribution being made. I am not sure that Colonel Starbird remembers the details in connection with their activity, but it does belong in the record.

Colonel STARBIRD. Right, sir. I believe—and I would like to correct it, if I might—I believe they spent in the neighborhood of $10,000 for that improvement on drainage.

Mr. HAYS. So they have proceeded in good faith to make their contribution.

Colonel STARBIRD. It was my understanding that they intended to. I will have to check it.

Mr. HAYS. I do not recall the facts, but I am sure you will find that is the case.

With reference to Holla Bend, the chairman will observe that the benefit-cost ratio is higher in this instance. I think all I need to say is that the only good land in that county is that which lies within this general area. That does not mean we are not good farmers. We have made good farms and attractive living conditions in the uplands, but I am speaking of the land that is highly productive.

What I have said is in relative terms, of course, but it is so vital to our economy that I trust the committee will accept Senator McClellan's recommendation.

Senator BUSH. Thank you very much for coming over.

Mr. HAYS. I am grateful to you, Senator, because I know how busy you are.

Senator BUSH. Without objection, the analysis on this project will be inserted in the record at this point.

(The document referred to is as follows:)

ARKANSAS RIVER, HOLLA BEND BOTTOM, ARK.

(H. Doc. 157, 82d Cong., 1st sess.)

Location: Holla Bend Bottom, which is known locally as Holly Bend Bottom, is located in Pope County, Ark., and extends along the left bank of the Arkansas River between river miles 255.3 and 241.9. No towns are located in the area, in which agriculture is the only industry. Principal crops are cotton, soybeans, corn, and hay.

Report authorized by: Resolution of the Committee on Flood Control of the House of Representatives, adopted April 19, 1946.

Existing project: There is no existing Federal project to provide local flood protection for Holla Bend Bottom. However, reservoirs to be constructed under the multiple-purpose plan for the Arkansas Basin authorized by the Flood Control Act of 1938 and the River and Harbor Act of 1946, and other acts, will reduce peak flood flows in the area.

Plan of recommended improvement: Provides for construction of a levee, along the left bank of the Arkansas River from mile 250.5 to mile 255.3 with necessary structures for interior drainage.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$252,000	$23,000	$275,000
Current	312,000	23,000	335,000

Local cooperation: Provide all lands, easements and rights-of-way; make any alterations to existing improvements that may be required; hold and save the United States free from damages; and maintain and operate all the works after completion.

Project economics:

	Project document	Current
Annual charges	$13,100	$12,900
Annual benefits	$13,700	$15,900
Benefit-cost ratio	1.05	1.23

Comments of the Bureau of the Budget: No objection to transmission of report to Congress. Advises project not in accord, however, inasmuch as all the benefits claimed in the report may not be realized. States that crop yields and prices appear quite optimistic. States further that if project is authorized, estimate of construction must be justified in accordance with Presidential directive of 1950.

Remarks: The recommended plan of improvement will protect about 1,990 acres in Holla Bend Drainage and Levee District No. 2, of which 1,570 acres are now in cultivation. The Corps of Engineers advises with respect to the adverse comments of the Bureau of the Budget, that if the project is authorized, the comments of the Bureau of the Budget will be carefully considered before construction funds are requested.

TRUCKEE RIVER, NEV. AND CALIF.

Senator BUSH. The committee will next take up the Truckee River, Nev. and Calif.

Senator MCCARRAN will be our first witness.

STATEMENT OF HON. PAT McCARRAN, UNITED STATES SENATOR FROM NEVADA

Senator McCarran. Mr. Chairman, I very much appreciate your courtesy in making time available for me to appear before the committee briefly and dwell on the need for the provisions of my bill, S. 3408, which would authorize a flood control and a reclamation project on the Truckee and Carson Rivers.

I am hopeful that the committee will see fit to include this project in H. R. 9859, the Omnibus Rivers and Harbors bill. The reason that this matter was not presented to the House committee when it was considering H. R. 9859 is that I wanted to be sure that all parties concerned had approved the Corps of Engineers report on the flood control features.

Mr. Chairman, I should like to dwell for a moment on the necessity for these projects. The purpose of the bill which I introduced, S. 3408, and which is now before you, is to authorize the comprehensive plan for flood control and upstream development of the Truckee and Carson Rivers which are located partly in California and partly in Nevada. The plan for developing the resources of these two rivers has been worked out by the Corps of Engineers in cooperation with the Bureau of Reclamation, the appropriate State agencies, and with the full cooperation of the "Truckee-Carson Water Users Committee," which consists of all of the various local water interests and which committee has been intensively working on this matter for some years. Thus, as the plan has developed all of the various interests concerned have worked closely together in its formulation.

Under ordinary circumstances I would only be before you in behalf of the flood-control features of the project. However, because of the peculiar geographical conditions which exist on the Truckee River it is imperative that the flood-control features and the upstream development go forward at the same time.

The Truckee River has its source in Lake Tahoe which straddles the California-Nevada border. It flows for some distance through the Sierra Nevadas, finally emptying into the valley wherein the cities of Sparks and Reno are located, and then entering a narrow canyon which the river has cut through the Virginia Range of mountains. At the mouth of this canyon there is a barrier which in times of flood backs the waters up until they cover much valuable farmlands, threaten to inundate highways and are a constant threat to the health of the people living in that section of the valley.

Continuing downstream from the mouth of this canyon, the Truckee flows until it finally empties into Pyramid Lake. Through the canyon and farther downstream are located many valuable ranches which produce alfalfa and other grass crops. The only reason that they have not been wiped out completely by flood has been due to the existence of the barrier reef which I mentioned before at the mouth of the Truckee Canyon.

Mr. Chairman, as with a great many rivers of the West, the people who live adjacent enjoy a "feast or famine" situation. By this I mean that the source of the water in the river is the melting snows of the Sierra Nevada Mountains and in the spring there is a constant threat of destructive floods. Then during the long summer there is a very substantial reduction in the flow. Thus we have the situation

that either there is too much water in the river, or when it is badly needed there is not enough.

To correct these situations, the Corps of Engineers is proposing a flood-control project which will eliminate the barrier reef at the entrance to the canyon where the river flows through the Virginia Range, as well as other channel improvements. The Bureau of Reclamation is proposing to develop the upstream resources of the Truckee River by the construction of reservoirs so that the rampaging floodwaters can be controlled and the precious water saved to irrigate the parched land.

I cannot overemphasize, Mr. Chairman, the absolute necessity for authorizing the flood control and reclamation features at one and the same time so that the development of this river may go forward without creating a situation wherein certain of the water users, people living adjacent to the river, are benefited while others are seriously damaged.

I wish to impress upon the committee that there is absolutely no disagreement on this point. Both the Corps of Engineers and the Bureau of Reclamation from the beginning have seen the necessity and desirability of proceeding in harmony with the respective parts of the work to be done. In addition, the Truckee-Carson Water Users Committee, which most adequately represents all of the local interests involved—both public and private—have approved the comprehensive plan for the development of the Truckee River provided that both are authorized and start at the same time.

May I divert a minute to say to you I am seriously interested in the simultaneous starting of this project. The upstream storage, which means storing of the waters before they get a chance to get down into what is known as Truckee Meadows or the valley in which Reno and Sparks are located, and before they get a chance to come down through the Virginia Mountains and destroy the lands below. In other words, if the reef at the mouth of the Truckee Canyon is removed and nothing is done to store the water above it, when the water comes down into the Truckee Meadows it will tear through that land and destroy all of the ranches between the mouth of the canyon and Derby Dam, which is a diversion dam for the Derby Canal, which diverts water from the river over to Lahontan Lake, where it is stored for the Newlands project.

Mr. Chairman, I believe that this is the most telling argument that I can present to you and the committee.

Mr. Chairman, it is vital that work start on this project without further delay. The best estimate that we can secure from the Bureau of Reclamation is that if this project is authorized during this session it will be approximately 3 years before benefits will be felt from the construction of upstream storage reservoirs. Each year the cities, towns, and adjacent ranches are threatened with destructive floods. In 1950 the city of Reno sustained heavy damage from the floodwater of the Truckee River, which descended on the city almost without warning due to a warm rain and quick thaw which almost overnight melted a heavy snowpack in the Sierra Nevada Mountains.

Mr. Chairman, I have confined most of my remarks to the Truckee River. I do not wish to leave the impression that the development of the Carson River is not of equal importance. Almost the same conditions exist along the course of this river, and the same threat

of property destruction, with possible loss of lives, is present during each spring runoff.

Mr. Chairman, with your permission I would like to call on representatives of the Corps of Engineers and representatives of the Bureau of Reclamation to explain very briefly to the committee the respective parts that their organizations will play in the comprehensive development of these two rivers. Before doing so, however, I should like again to express my appreciation for your courtesy in making time available to me.

Senator BUSH. We will hear from Colonel Starbird on this project now.

Colonel STARBIRD. The Truckee River Basin was investigated pursuant to provisions of the 1938 Flood Control Act. That river, as shown on the small-scale map, flows from Lake Tahoe, a distance of approximately 100 miles to Pyramid Lake. The total population of the basin is in the neighborhood of 53,000 permanent residents. It has a large number of summer residents, particularly around the Lake Tahoe area. About 35,000 of the permanent population live in the city of Reno. The Senator has described the river very thoroughly and ably, so I will not repeat. I would like to point out there is a spillway structure which has been put in at Lake Tahoe by the Bureau of Reclamation, and a dam on the Little Truckee. The Bureau has constructed Derby Diversion Dam and a canal to carry waters to an area off the map.

Additional features recommended by the Bureau will be described later.

The largest single area in the flood plain which is in intensive use and which is repeatedly flooded, is the area of the Truckee Meadows. It is an area of about 5,000 agricultural acres, located directly below the city of Reno. Also the channel is deemed inadequate below the Tahoe spillway to take care of the necessary outflow so that the lake level can be controlled to the degree desirable.

The Corps of Engineers' plan is quite simple. It recommends about 3,200 feet of channel improvement directly below the lake, the river to have an added depth of about 4 feet and to have a total bottom width of around 50 feet.

Through the Truckee Meadows the channel would be improved and various rock ledges would be cut.

The overall length of the Meadows project would be in the neighborhood of 7½ miles. The total cost of the Corps of Engineers' work would be $791,000 to the Federal Government. Local interests would be expected to furnish any necessary lands, rights-of-way, and effect relocations except railroad relocations, provide debris removal facilities at Derby Dam, and to maintain and operate the project upon completion.

The estimated initial cost to local interests is $169,000.

The benefit-cost ratio of the project is 1.62 to 1.

The project has been reviewed by both the Department of the Interior and the Department of Agriculture. The Department of Agriculture offered no objection to the project. The Department of the Interior had certain comments, which we believed can be worked out satisfactorily during the planning stage of the project. They are not objections to the project.

The report has been forwarded to the Bureau of the Budget and the Bureau of the Budget has not submitted its final report as yet.

Both the State of Nevada and the State of California have submitted favorable reports.

Senator McCarran. If the engineer would care to comment on the Carson River phase of this it would help.

Colonel Starbird. We have an overall study underway in coordination with the Bureau of Reclamation. I believe some of the Bureau of Reclamation recommendations that they will describe to you today lie on the Carson River. We have not completed our comprehensive study. It will be completed as rapidly as funds are available for that purpose.

Senator McCarran. I want to dwell a moment on the barrier, if I may, with the permission of the chairman. The barrier to which I referred and to which the engineer referred is about in here. In other words, there is the valley around here known as the Truckee Meadows. Evidently in ages gone by that barrier was much more extensive than it is now. In my judgment the Truckee Meadows was an auxiliary lake to Lake Tahoe. Eventually it was worn down. But today it serves as a barrier to hold the water back and that protects the ranches down below from this terrific flood. When that barrier is removed then the floodwaters will go right straight through. Therefore it is essential that the channel east of the barrier and from there down to the Derby Dam shall be straightened and widened so as to take care of the ranches on either side.

I might say to you I was reared right in this vicinity and spent my boyhood days there, and north of it.

Senator Bush. Yes. That is very interesting, Senator. Unless you have some other remarks, Senator, did you have anyone esle to present?

Senator McCarran. I wanted to get the Bureau of Reclamation to express their opinion. May I ask a question of the engineers, please?

Senator Bush. Yes.

Senator McCarran. I take it your plan does not contemplate a lowering of the reef at the outlet of the lake?

Colonel Starbird. I think it does not affect the reef, No; it does not, sir.

Senator Bush. Will you kindly give your name and connection?

STATEMENT OF E. O. LARSON, REGIONAL DIRECTOR OF THE BUREAU OF RECLAMATION, REGION IV, SALT LAKE CITY, UTAH

Mr. Larson. My name is E. O. Larson. I am regional director of the Bureau of Reclamation, region IV, with headquarters in Salt Lake City, Utah.

Senator Bush. Thank you. You may proceed.

Mr. Larson. The statement I have is a very brief statement covering the proposed plan of the Bureau of Reclamation for the Washoe project, and is based on the proposed report of the Washoe project now in the Commissioner's office.

The Washoe project would be integrated with the existing Truckee River storage and Newlands projects, and it would be coordinated with the development proposed by the Corps of Engineers in its interim report of January 1953, for enlarging the Truckee River channel.

The project would provide increased irrigation supplies averaging 72,700 acre-feet annually, that would be used for the full irrigation of 5,100 acres of land in Carson Valley and the supplemental irrigation of 44,460 acres in Carson Valley and in the Empire, Dayton Bottoms, and Fort Churchill areas. In addition, during dry cycles, it would firm the existing supplies of the Truckee River storage and Newlands projects, formerly constructed by the Bureau of Reclamation. Project hydroelectric energy would average 92,760,000 kilowatt-hours annually. Flood damages would be reduced by $288,200 annually and seepage would be alleviated on 18,170 acres in Carson Valley and 16,000 acres in Truckee Meadows.

In the Truckee River Basin the Stampede Reservoir would be built to a capacity of 126,000 acre-feet on Little Truckee River. Reservoir water would be discharged through the Stampede tunnel and Calvada penstock to the 20,000 kilowatt Calvada powerplant on the Truckee River. Below the powerplant the water would be regulated at the 226-acre-foot Calvada Reservoir. It would then flow in the Truckee River channel and through existing facilities to meet established rights and to replace some of the Carson River water now used on the Newlands project for use higher upstream. In the Truckee Meadows, deep drains would be installed and wells would be constructed to relieve artesian pressure.

In the Carson River Basin the Watasheamu Reservoir on the East Fork of the Carson River would be constructed to a capacity of 115,000 acre-feet. The reservoir would regulate flood flows now running to waste and some water now used by the Newlands project which would be replaced at Washoe project water from the Truckee River. Releases from Watasheamu Reservoir would pass through the 8,000 kilowatt Watasheamu powerplant at the base of the dam. It would then be regulated at the Dressler diversion dam and afterbay that would provide a storage capacity of 1,040 acre-feet. At the dam some water would be diverted into the potential Carson Canal that would serve new lands along its course in Carson Valley and also deliver water to the West Fork of Carson River for distribution by existing canals diverting from that stream. Some water bypassing Dressler diversion dam, together with return flows reaching the stream would be diverted to lands in Carson Valley, and in the Empire, Dayton Bottoms, and Fort Churchill areas. The remaining flows passing Dressler Dam would continue on the Lahontan Reservoir of the Newlands project. The existing Allerman Canal in the Carson Valley would be enlarged and extended. Some new laterals would be constructed and existing laterals would be improved and extended as necessary. Systems of main drains would be installed in Carson Valley.

Summarized data for the project appears herewith.

Irrigation and drainage lands

Irrigable acreage:	
New land	5,100
Supplemental	44,460
Total	[1] 49,560
Drainage land	[2] 34,170

[1] Excludes supplemental water used in Truckee River storage and Newlands project.
[2] Includes 18,170 acres in Carson Valley that would receive supplemental water.

Principal agricultural production: Alfalfa, grain, pasture, dairy cows, and beef cattle.

Water supply (acre-feet): Average annual increase in water made usable by project, 72,700 acre-feet.

Project works: The principal project works would include two main dams and reservoirs—the Stampede and Watasheamu—with total capacities of 126,000 and 115,000 total acre-feet respectively, the Dressler diversion dam and afterbay, Calvada regulatory dam and reservoir, Stampede tunnel, Calvada and Watasheamu powerplants and transmission systems, canals, laterals, and drains.

Construction cost and repayment

Estimated cost		$42,399,000
Reimbursable cost allocated to irrigation and drainage	$18,030,000	
Power	18,478,000	
Total		36,517,000
Nonreimbursable cost allocated to flood control		5,882,000
Repayment of reimbursable costs by—		
Irrigation costs:		
From water users	$7,899,000	
From project power revenues	[1] 10,140,000	
Total		18,039,000
Power costs from project power revenues		18,478,000
Total repayment		36,517,000

[1] Over a period of 15 years following power payout:

Annual operation, maintenance, and repair costs:	
Irrigation and drainage	$58,700
Power	152,300
Flood control	6,800
Total	217,800
Benefit-cost ratio	2.2 to 1

Repayment: Irrigation and drainage payments by the water users would be made on the irrigation investment over a period of 50 years after suitable development periods for various project lands. During this period water users would pay up to their ability. The power investment would be amortized in 50 years at 2½ percent interest, with sale of power at an average of about 9 mills per kilowatt-hour. All interest received would go into the Treasury. Any net power revenues during the payout period for the power investment and the net power revenues accruing for 15 years thereafter would be applied on the irrigation and drainage allocation not paid for by the water users. In effect, the reimbursable Federal costs of the project would be returned to the Treasury in a period of 54 years following the appropriate development periods for project lands.

Senator BUSH. Thank you very much indeed for that statement. Now, Senator, have you anything else?

Senator MCCARRAN. Have you a comprehensive idea of the situation? The Carson River is depicted on here and in Newlands project in light green farthest to the right. The Lahontan Reservoir is in the heavy green. That does not come out of Lake Tahoe. It is Truckee only that comes out of Lake Tahoe and it, of course, goes up to the top of the map. The two rivers were combined when the Newlands reclamation project was put in. It was the first reclamation

project put in under the Reclamation Act. The water of the two rivers was connected by a canal leading from the Derby Dam to Lahontan Lake, which is an artificial lake created in the bed of the Carson River, so they both contribute to the Newlands project at the present time, as well as taking care of the irrigable lands along the course of the river.

Is there any question you would like to ask?

Senator BUSH. No, sir. I think it is a very good presentation, and I am very much obliged to you for coming here.

Senator MCCARRAN. Thank you very much.

Senator BUSH. The analysis on the Truckee River and tributaries and S. 3408 will be made a part of the record at this point.

(The documents referred to are as follows:)

[S. 3408, 83d Cong., 2d sess.]

A BILL Authorizing the construction of flood-control works on the Truckee River, California and Nevada, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That the comprehensive plan for flood control and other purposes on the Truckee and Carson Rivers, California and Nevada, is approved and the projects contained therein are authorized as follows:

(A) The project for the improvements for flood control on Truckee River, California and Nevada, recommended in the report of the Chief of Engineers, United States Army, dated April 15, 1954, at an estimated cost of $791,000, is hereby authorized, and shall be prosecuted under the direction of the Secretary of the Army and the supervision of the Chief of Engineers in accordance with the plan recommended in that report and subject to the conditions of local cooperation set forth therein.

(B) The Washoe Federal reclamation project is hereby authorized for construction, operation, and maintenance by the Secretary of the Interior in accordance with the recommendations contained in the report thereon by the Regional Director of the Bureau of Reclamation dated January 1954. Notwithstanding any other provisions of law to the contrary, net revenues derived from the sale of commercial power from the project shall be applied, first, to the amortization of that portion of its construction cost which is allocated to commercial power with interest on the unamortized balance thereof at the rate of 2½ per centum per annum, and, thereafter, to the amortization of that portion of its construction cost which is allocated to irrigation and drainage but which is beyond the ability of the contracting irrigation and drainage organizations to repay as provided in the report.

SEC. 2. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act.

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA

(Report of Chief of Engineers, April 15, 1954)

Locations: Truckee River begins at the outlet of Lake Tahoe near Truckee, Calif., and flows northerly and easterly through Reno, Nev., to Pyramid Lake.

Report authorized by: Flood Control Act, June 28, 1938.

Existing project: None. Clearing and snagging to extent of $70,000 accomplished after 1950 flood with emergency funds.

Plan of recommended improvement: Provides for channel improvement below control structure at Lake Tahoe and downstream from Reno through Truckee Meadows.

Estimated cost:

	Federal	Non-Federal	Total
October 1953 price level	$791,000	$169,000	$960,000

Local cooperation: Provide suitable debris removal facilities at Derby Dam; furnish lands, easements, and rights-of-way necessary for construction and relocate all roads and utilities required; hold and save the United States free from damages; and maintain and operate all works after completion.

Project economics:

Annual charges:	
Federal	$28,000
Non-Federal	23,000
Total	51,000
Annual benefits: Prevention of flood damages	82,500
Benefit-cost ratio	1.62

Remarks: The report is with the Bureau of the Budget for clearance prior to submission to Congress.

STATEMENT BY HON. CLAIR ENGLE, MEMBER OF CONGRESS FROM STATE OF CALIFORNIA

Mr. Cnairman, I would like to make a statement in oppostion to inclusion of the Truckee River irrigation, power, and flood-control development in H. R. 9859, the omnibus rivers and harbors and flood-control bill.

First, this development is primarily for irrigation and has no place before this committee. Out of an estimated cost of over $42 million less than $6 million would be for flood control. The plans for this development are being prepared by the Department of the Interior, and the proposal should be given consideration by the Interior and Insular Affairs Committee at the proper time.

Secondly, a request for authorization at this time is premature. The planning documents have not been reviewed by the States of Navada and California and have not been approved in Washington.

Thirdly, and most important, is the fact that the proposal involves the use in Nevada of waters of the Little Truckee River in my district in California.

I am not saying that we will impose objection to such use. I am saying, however, that we object to the plans presently contemplated whereby waters of the Little Truckee River are diverted, for power purposes, from a reservoir in California to Nevada without being allowed to flow their normal course downstream.

The operation of such a plan would detrimentally affect the natural resources of eastern Nevada County, particularly the fishing and recreation facilities.

Both Nevada County, Calif, and Placer County, Calif. are formally opposing the plans presently contemplated for this development, and the Truckee Public Utility District is also protesting the proposed plans.

It is requested that this development not be considered for authorization until the plans therefor have been completed, the views of California thereon obtained, and agreement has been reached with respect to the use of Little Truckee River water and the plans for such use.

RESOLUTION

Whereas the Bureau of Reclamation has completed a report for submission to the Congress of the United States, wherein it is proposed to divert waters from the Little Truckee River in eastern Nevada County, State of California, to the State of Nevada; and,

Whereas, it is deemed to be contrary to the best interests of the people of the county of Nevada, State of California, and to the State of California that its waters should be diverted when the utilization of the same is being made and can be made by its own inhabitants: Now, therefore, be it

Resolved by the Board of Supervisors of Placer County, Calif., That they join the Board of Supervisors of Nevada County, Calif., in their protest in the diversion of said waters: Be it further

Resolved, That copies of this resolution be forwarded to United States Senator Knowland, United States Senator Kuchel, Congressman Clair Engle, Gov. Goodwin J. Knight, State Engineer A. E. Edmonston, State Senator Harold P. Johnson, State Assemblyman Francis Lindsay, and the Board of Supervisors of Nevada County, California.

The foregoing resolution was duly passed by the Board of Supervisors of the County of Placer at a regular meeting thereof on the 10th day of May 1954, by the following vote on rollcall:

Ayes: Supervisors Paolini, Boyington, Waddle, Paoli, and Anderson.
Nays: None.
Absent: None.
Signed and approved by me after its passage this 10th day of May 1954.

L. L. ANDERSON,
Chairman of the Board of Supervisors.

Attest:

L. RECHENMACHER, *Clerk.*
By BARBARA BOTHELLO, *Deputy.*

RESOLUTION

Whereas the Bureau of Reclamation has completed a feasibility report of the Washoe project for submission to the Congress of the United States, wherein is proposed the building of Stampede Reservoir on the Little Truckee River with direct diversion of the waters therefrom through a tunnel into the State of Nevada; and

Whereas eastern Nevada County's most vital and greatest asset is its waters, both for fishing and recreation as well as for present and future potential industrial and power development; and

Whereas diversion in the manner proposed would seriously and detrimentally affect the natural resources of Eastern Nevada County by diverting the waters of the Little Truckee River from their natural course through Nevada County into the Truckee River; and

Whereas the diversion of the waters of the Little Truckee River from Nevada County without the opportunity now or in the future of the fullest utilization of such waters within Nevada County and the State of California is contrary to the best interests of the inhabitants thereof; and

Whereas, the flood-control and irrigation features of the proposed Washoe project for the benefit of the people of the State of Nevada can be as substantially realized by other suggested plans of the Bureau of Reclamation which would retain to the people of Nevada County and the State of California greater utilization of the multiple uses of the waters of this county: Now, therefore, be it

Resolved by the Board of Supervisors of Nevada County in regular meeting assembled, That we most earnestly protest the diversion of the waters of the Little Truckee River in the manner now proposed in the feasibility report of the Washoe project; and furthermore be it

Resolved, That all interested parties be requested to protest such diversion in the manner proposed and that copies of this resolution be forwarded to United States Senator Knowland, Congressman Clair Engle, Gov. Goodwin Knight, State Engineer A. D. Edmondston, State Senator Harold T. Johnson, and State Assemblyman Francis Lindsay, and others urging their assistance in having a reconsideration of the project as now proposed so as to preserve and protect the interests of the people of Nevada County and the State of California.

Passed and adopted this 1st day of April 1954, by the following vote:

Supervisors voting aye: Supervisors Curtis R. Clark, John L. Frank, J. C. Coughlan, Guy N. Robinson, Henry G. Loehr.
Supervisors voting no: None
Supervisors absent: None.

GUY N. ROBINSON,
Chairman of the Board.

Attest:

R. E. DEEBLE,
Ex Officio Clerk of the Board.

WEST BRANCH OF THE SUSQUEHANNA RIVER, PA.

Senator BUSH. We will take up the project known as West Branch of the Susquehanna River in Pennsylvania, and ask first for the engineers to give us an explanation of the project.

Colonel STARBIRD. Sir, the West Branch of the Susquehanna is shown on the upper small-scale map. The river rises in Cambria

County and flows a distance of 240 miles to the city of Sunbury. That same flowage is shown on this larger scaled map. At Sunbury the river joints the North Branch of the Susquehanna River and flows another 123 miles into the upper end of Chesapeake Bay. The total area drained by the West Branch, is 6,990 square miles.

The area had a population in 1950 of 381,000 persons. Williamsport was the largest city. It had a population of 45,000 persons.

The area can be generally divided into two seperate sections: The section above Lock Haven and the area east of Lock Haven.

Above Lock Haven the river and tributaries follow generally narrow valleys, and the rate of fall is relatively high. The resources of the area include timber, farming, and coal. Below Lock Haven the valley widens out. There we have certain industrial cities.

The major one is Williamsport. There also the valley is extensively developed for agricultural purposes, particularly dairy farming.

The valley itself has a long history of flooding and we have good flood records. We have had nine major floods since 1846. The largest flood of record was in 1936. If that flood recurred now without any control on the river, we estimate the damages would be $33 million.

We estimate the average annual damages on the West Branch as being in the neighborhood of $5 million per year. Of course, the West Branch contributes to flooding below Sunbury on the main stem of the Susquehanna.

Certain developments have been authorized or installed along the river. A local protection works at Sunbury has been completed; one at Williamsport at a cost of $14 million is now about three-quarters complete. In addition, the State has undertaken a great deal of work on its own accord. It has put in a small dam on Little Pine Creek; a dam and reservoir of about 23,700 acre-feet. It has now under construction a dam, First Fork Dam, on one of the major tributaries of the West Branch.

In addition, the State has undertaken something over 60 local works in the past few years. Those local works generally were clearing and snagging or channel improvement.

The district engineer investigated this area prior to 1951. He first devised a plan that embraced four flood-control reservoirs shown on the map, plus an additional multiple-purpose reservoir in the vicinity of Keating. That plan was reviewed after a hearing by the Board of Engineers for Rivers and Harbors.

A great many people appeared at that time for and against certain features of the project. As a result of that hearing and the review that has been made since that time the report has been revised to recommend an interim flood-control plan. The interim report recommends the construction of four dams and reservoirs: The Curwensville Dam and Reservoir of 118,500 acre-foot capacity at a current estimated cost of $24 million; the Blanchard Dam and Reservoir of 113,000 acre-foot capacity, at a current estimated cost of $23 million; construction by the State of Pennsylvania of the First Fork Dam, with 79,000 acre-foot capacity, at a cost in the neighborhood of $18 million; and Kettle Creek Dam by the Corps of Engineers, at an estimated cost of $15,400,000, with about 74,000 acre-foot capacity.

Investigation was made of each of these sites to determine whether power could be economically installed at the present time. It was

determined by the Chief of Engineers that it could not be, so flood-control dams only are recommended in each of the four cases.

The total estimated cost of the project to the Federal Government would be $62,500,000. This, of course, would be exclusive of the cost borne by the State for First Fork Dam which it is presently constructing.

Considering these dams and the dams on the North Branch of the Susquehanna as a part of an overall comprehensive system, and distributing the benefits to the several dams of the system and to the local protection works that are authorized, the project of these four dams has a benefit-cost ratio of about 1.44 to 1.

The 3 dams recommended for Corps of Engineers construction would have a benefit-cost ratio of 1.37 to 1.

The report has been reviewed by the Department of the Interior, who offered no objection that we believe cannot be met during the planning stage.

The Department of Commerce offered no objection.

The Federal Power Commission recommended that, at the time Kettle Creek Dam went into detailed planning status, a reinvestigation be made as to the economic feasibility of incorporation of power therein.

The Commonwealth of Pennsylvania, commenting on the report, stated that it considered the plan sound. However, it considered also that further investigation should be made of upstream dams and reservoirs as supplements to the currently recommended plan.

The Department of Agriculture reviewed the report and had three pertinent comments. One comment was to the effect that we had assumed a project flood might occur in a 50-year period, 20-percent greater than any flood that had occurred in the past. We believe there is a possibility of such a storm occurring in view of the rainfall records in the other areas surrounding the West Branch, and we have so answered the Department of Agriculture.

The Department of Agriculture also commented to the effect that we have, in computing our benefit-cost ratio, considered projects already authorized and completed, already authorized and incomplete, and reservoirs that were yet to be authorized as parts of a comprehensive system. We did so do. However, even considering the benefits on structures already complete as already realized and not available for application to the new structure, the four-reservoir system would have a favorable benefit-cost ratio. In this particular case there is a close interrelationship between features of the program, and it is impracticable to tell exactly what features will be built next.

The Department also commented to the effect that they believed there should be further consideration of small-dam structures, and believed a coordinated plan incorporating large and small dams should be submitted simultaneously. The report has been submitted to the Bureau of the Budget recently. The Bureau of the Budget has not yet commented.

This plan when completed would reduce by roughly 58 percent the damages that occur on the West Branch of the river. It would reduce the damages on the river below Sunbury, by approximately 35 percent. The overall damage reduction we estimate to be somewhere in the neighberhood of $4 million.

That is all I have, unless you have questions, sir.

Senator BUSH. Thank you very much, Colonel. Congressman Bush.

STATEMENT OF THE HON. ALVIN R. BUSH, MEMBER OF CONGRESS FROM THE 17TH CONGRESSIONAL DISTRICT OF PENNSYLVANIA

Mr. BUSH. Mr. Chairman, I appreciate this opportunity of appearing before your committee. I am here in behalf of the residents in this area as their representative, because most of the damage caused by floods occurs in the area which I represent.

As Colonel Starbird said, the flood that we had in 1936 was one of the greatest in the history of the valley. It did tremendous damage. Again we had one in 1946, and that did tremendous damage. We had another one in 1950, which was localized to some extent and did a tremendous damage in the Lock Haven area.

Then this spring there were certain portions of the river which overflowed its banks. As a result there were minor damages done. Had the rain kept coming we could have had another very severe flood.

It is an area in which the people live in fear most of the time because of the damage to their homes and industries and jobs and to the farming communities. It is a project that is worth while. It is needed, and one which if we do not get some help on pretty soon, many of the buildings that are now being used by industry and as homes just cannot stand going through these floods as frequently as they come. The damage will continue to be great.

I certainly urge that we get this included in the omnibus bill if it is possible at all to do so. I happen to be a member of the Public Works Committee in the House, and we did not have the report ready so that we could hold hearings over there on this. That is the reason why I am here pleading for you to give it every consideration on the basis of the great need and of the ratio of benefits which is also very great.

I realize that there is opposition to this project. There is opposition to all projects where large dams are involved. It has been my experience that where we do a lot of good for communities there are certainly some others who must not have the same view, and as a result they are hurt; but not nearly to the extent that the flood hurts the ones that are in the flooded area.

I might compare that with many of your road-construction programs. In order to get a good highway, somebody has to give. They must give. And they are paid for their damage. In this case whatever damage is involved will have the cost borne by the Government.

I do not think there is anything more I can add.

Senator BUSH. Did you have someone here you would like to introduce?

Mr. BUSH. We have a number of people here, and with your permission we would like to have their names appear in the record.

(The list referred to is as follows:)

LIST OF ENDORSERS, WEST BRANCH SUSQUEHANNA RIVER FLOOD-CONTROL PLAN

The Rotary Club of Muncy, Lycoming County, Pa.
The Borough Council of Montgomery, Lycoming County, Pa.
The Rotary Club of Montgomery, Lycoming County, Pa.
The Borough Council of Milton, Northumberland County, Pa.
The County Commissioners of Cameron County, Pa.
The Lions Club of Lock Haven, Clinton County, Pa.

The Chamber of Commerce of Lock Haven, Clinton County, Pa.
The Pennsylvania Business Service of Lock Haven, Pa.
The Borough Council of Jersey Shore, Lycoming County, Pa.
The County Commissioners of Northumberland County, Pa.
The Borough Council of South Williamsport, Lycoming County, Pa.
The Clearfield Lions Club of Clearfield, Clearfield County, Pa.
The Exchange Club of Lock Haven, Clinton County, Pa.
The Civic Club of Lock Haven, Clinton County, Pa.
The Chamber of Commerce of Clearfield, Clearfield County, Pa.
The Lions Club of Renovo, Clinton County, Pa.
The Rotary Club of Lock Haven, Clinton County, Pa.
The City Council of Williamsport, Lycoming County, Pa.
The Borough Council of Renovo, Clinton County, Pa.
The city of Lock Haven, Clinton County, Pa.
The Community Trade Association, Renovo, Clinton County, Pa.
The Rotary Club of Renovo, Clinton County, Pa.
The Clearfield Kiwanis Club, Clearfield, Pa.
The West Branch Beagle Club of Clinton County, Pa.
The Kiwanis Club of Emporium, Cameron County, Pa.
The Rotary Club of Emporium, Cameron County, Pa.
Chester A. Anstadt, president, Clearfield Borough Council; vice president, Clearfiled Hospital; president, Clearfield Building and Loan.
George W. Gaylor, secretary, Clearfield Chamber of Commerce.
Harry G. Ganoe, secretary, Susquehanna River System Flood Control Association, Inc.
Dr. M. R. Derk, president, Lycoming County Flood Association; director, West Branch Manufacturing Association.
Paul Bailey, country treasurer, Lycoming County; president, State Association of County Treasurers.
Sam Thatcher, Montoursville Borough Council.
C. E. Noyes, manager, Community Trade Association, Williamsport.
Walter W. Wilson, director, West Branch Manufacturing Association.
Preston B. Davis, president, Susquehanna System Flood Control Association; also attorney for Milton and surrounding area.
Mayor Charles Herr, Lock Haven.
J. F. Puderbough, city superintendent of schools.
Philip A. Teah, area development chairman.
John A. Frey, secretary, L. H. C. of C.
George B. Stevenson, senator, Pennsylvania 26th Senatorial District.

Now I would like to have State Senator Stevenson appear in behalf of the proponents and those who support this project. He is also vice chairman of the Pennsylvania Flood Control Projects in Pennsylvania.

I would like to present Mr. Stevenson at this time.

Senator BUSH. Senator, we are very glad to have you here. How long is the statement you contemplate making?

STATEMENT OF HON. GEORGE B. STEVENSON, SENATOR FROM THE 26TH SENATORIAL DISTRICT OF THE STATE OF PENNSYLVANIA

Mr. STEVENSON. As long as you want.

Senator BUSH. We are very much limited for time. We will hear you for 10 minutes if that is long enough.

Mr. STEVENSON. I think so.

Senator Bush, in the first place I want to present to the committee resolutions that have been passed by organizations in various cities, and so on, throughout that valley. We want to present to your subcommittee and committee a pictorial and newspaper account of the floods that have visited our area.

That is typical. You notice the main street in Lock Haven, and how high the water is there. If you will glance at another on page 31,

you get another idea of the volume of water that comes down into that city, and it is proportionately all through the West Branch Valley.

Senator BUSH. If there is no objection, we will keep these documents for reference by the committee and will list the resolutions in the record as having been received, but not print them in full. They are all in favor of the project.

(The list of resolutions is as follows:)

RESOLUTIONS IN FAVOR OF PROJECT FOR WEST BRANCH OF THE SUSQUEHANNA RIVER, PA.

Clearfield Kiwanis Club, Clearfield, Pa.
Clearfield Borough Council, Clearfield, Pa.
Lions Club, Clearfield, Pa.
Chamber of Commerce, Clearfield, Pa.
Lock Haven Chamber of Commerce, Clinton County, Pa.
Cameron County Board of Commissioners, Emporium, Pa.
Borough Council, Milton, Pa.
Rotary Club, Muncy, Pa.
Borough Council, Montgomery, Pa.
Rotary Club, Montgomery, Pa.
Borough Council, Renovo, Pa.
Civic Improvement Association, Milton, Pa.
Borough Council, Jersey Shore, Pa.
Borough Council, Emporium, Pa.
Lycoming County Commissioners, Williamsport, Pa.
Retail Merchants Bureau, Lock Haven, Pa.
Community Trade Association, Renovo, Pa.
Kiwanis Club, Emporium, Pa.
Rotary Club, Emporium, Pa.
West Branch Beagle Club, Lamar, Pa.
Rotary Club, Renovo, Pa.
City Council, Williamsport, Pa.
Lions Club, Renovo, Pa.
The Civic Club, Lock Haven, Pa.
Susquehanna River System Flood Control Association, Clearfield, Pa.
Rotary Club, Lock Haven, Pa.
Borough Council, South Williamsport, Pa.
Commissioners, Northumberland County Pa.
Borough Council, Montgomery, Pa.
Borough Council, Hughesville, Pa.
Borough Council, Columbia, Pa.
City of Lock Haven, Pa.
Lions Club, Lock Haven, Pa.
The Exchange Club, Lock Haven, Pa.
Frederick B. Heal, treasurer, Variety Stores, Inc.
Edward B. Sohmer, real estate division, Lock Haven, Pa.

Mr. STEVENSON. We would like very much if this particular brochure would be returned to Representative Bush when you are finished with it.

Senator BUSH. We will do that, but we would like to keep it for the executive hearings so it can be shown to the members.

Mr. STEVENSON. Yes, sir.

Colonel Starbird has discussed something of the damage that has occurred over the years in the West Branch Valley. I just want to bring out the amount of damage that occurred in a 14-year period.

In 1936 we suffered a loss in the West Branch Valley of $36 million. That was in 1936 dollars, which today would be considerably more.

In 1946 there was an estimated damage of $20 million, and of course that would be considerably more today.

In 1950 we had an additional loss of $20 million. So I think we are safe in saying that the losses in that 14-year period in that valley have exceeded $100 million.

Senator BUSH. Of present dollars.

Mr. STEVENSON. Of present dollars. That is correct. So I think those facts speak more persuasively than any arguments that we might try to use to prevail upon your committee here today.

During this period, and especially after the 1936 flood, the people of that area have been living in an endless round of anxiety, and every time that we have a heavy rainfall there is a suspense on the part of all the people in that area. They do not know what is going to happen. In fact, the lives of the people in that area you might say have been very severely tried as a result of these floods.

The Army engineers, as the colonel has stated, have made a recommendation for four dams. We did not advise where the dams were to be located. They were located by the engineers themselves. But during that survey they made a survey of 30 sites for dams. It was found up at the headwaters due to the topography of the country there was not enough impounding area to warrant the building of small dams. So they concentrated on the four larger dams.

They project that in case these dams are built that the flood crest will be lowered 5.3 feet at Clearfield and on down the valley through Williamsport, and down to Sunbury, 4 feet in height, which would practically eliminate a flood like we had in 1946 and 1950, when we suffered the twin $20 million losses.

The Commonwealth of Pennsylvania has been tremendously interested in giving some assistance to this valley. They recognize the urgency of some things being done and they are constructing a dam at First Fork to the tune of about $18 million.

I think you will agree, Senator, that this local contribution is something that is unexampled in the history of Federal flood control. We try to help ourselves in Pennsylvania. We are building the dam at First Fork and built the dam at Little Pine Creek out of State funds. Both of them together will probably run twenty-odd millions of dollars.

The people of Pennsylvania rather think it is time that the Federal Government accepted its responsibility in this matter. We have shown that we need it, and we have demonstrated that by backing it up by dollars. So we would urge very strongly that this project of these four dams be included in your omnibus bill.

This valley of the West Branch is one of the most flood-ridden valleys in the United States. The strain that it has placed upon our industries and upon our mercantile establishments, institutions, and churches, and our people, is almost beyond endurance.

We feel if this area is not given some type of flood protection that then the industrial future is practically ruined. Our people have met these continued disasters with great courage and resilience, and they feel they have earned the right to live the same kind of normal life that people live in areas where they are not having these constant threats.

Senator Bush. May I ask a question?

Mr. STEVENSON. Yes.

Senator BUSH. Prior to 1936, can you give the committee very briefly the flood history of that area? You mentioned very severe

flooding in 1936. What was the history in the previous 36 years, let us say?

Mr. STEVENSON. We had a very severe flood in 1887. I believe the colonel has a list of the floods, do you not, Colonel?

Colonel STARBIRD. The most severe were in 1889, 1894, 1936, 1946, and 1950.

Senator BUSH. There were serious floods back in the previous century?

Colonel STARBIRD. Oh, yes, sir.

Senator BUSH. So it is not any new condition due to the taking out of trees, or anything like that?

Mr. STEVENSON. No, sir. We do not attribute it to that. We feel there is a great need for some soil conservation and reforestation in that area, and they are part of the answer, but not the complete answer by any means, we do not believe. These large dams are really the answer. Anyway, a plan of soil conservation and reforestation would be quite a large number of years taking effect, and while that is being developed we might have 10 additional floods which would destroy our whole industrial establishment in that area.

Senator BUSH. I am afraid your time is expired so I will have to ask you to discontinue.

Mr. STEVENSON. All right. I want to thank you for your courtesy.

Senator BUSH. Congressman, I am very much obliged to you.

Mr. BUSH. We certainly appreciate it.

Mr. STEVENSON. We certainly appreciate it.

Senator BUSH. I submit for the record, without objection, a letter by Ivor D. Fenton, Congressman from the 12th District of Pennsylvania, in connection with this matter.

I will also submit at this point in the record a telegram signed Dean L. Hile, from Curwensville, Pa., expressing an interest in this matter.

(The documents referred to are as follows:)

CURWENSVILLE, PA., *July 23, 1954.*

JAMES E. VAN ZANDT,
Subcommittee of Senate Committee on Public Works,
Senate Office Building:

Please give serious consideration to the direct and ultimate loss to the community adjoining area and even distant districts by permitting or encouraging the building of the dry dam at Curwensville, Pa. This is a critical area with vast mineral resources to be developed in addition to the loss of homes and industries, disruption of the American way of life, denied free choice of the pursuit of happiness to retain our possessions, directly and indirectly, and resulting in an unhealthy location. The way I see it our constitutional rights are ignored and we are not enjoying the protection or consideration we are entitled to. I believe an alternate flood control would give better results and would not destroy communities but would result in expansion, conserve the water level, and attract industrial development. Our property and investments should not be taken from us and destroyed for an unproven protection to others.

DEAN L. HILE.

HOUSE OF REPRESENTATIVES,
Washington, D. C., July 23, 1954.

Hon. EDWARD MARTIN,
Chairman, Senate Public Works Committee,
412 Senate Office Building, Washington, D. C.

DEAR ED: Due to a meeting of my Foreign Aid Appropriations Subcommittee I am unable to attend your hearing this morning but I want to go on record to include in your bill authorization for the flood-control project for the West Branch of the Susquehanna River, Pa.

The report of the Board of Engineers and the interim report of the Chief of Army Engineers on the flood-control plan of reservoirs on the West Branch of the Susquehanna River have been reviewed by the Commonwealth of Pennsylvania and the interested Federal agencies. I understand that the Commonwealth of Pennsylvania has concurred generally with the proposed recommendations of the Chief of Engineers.

I think that this project is long overdue, and you can be certain of my wholehearted cooperation in bringing about fulfillment of the many promises that have been made to provide this flood protection that is so sorely needed to preserve life and property. I sincerely hope that your committee will take favorable action immediately.

Sincerely,

IVOR D. FENTON.

Senator BUSH. I believe Mr. George Denithorn is here, with Mr. John Love and County Commissioner Harry B. Keeler. Will those gentlemen please come forward?

Mr. Denithorn.

STATEMENT OF GEORGE DENITHORN

Mr. DENITHORN. I am he.

Senator BUSH. Do you wish to speak now?

Mr. DENITHORN. How much time will I have?

Senator BUSH. We will give you 10 minutes, sir. We might stretch it to 12 under great pressure, but we do have a very limited time. We have a very large agenda and a very limited amount of time left in this session of Congress, and are very anxious to get these hearings over with so we can have an executive committee meeting and discuss the bill and get it before the Congress. Therefore, we are treating all witnesses in the same way and giving them a limitation of time. Will you make the best use of your time?

Mr. DENITHORN. Senator Bush, the opponents to the interim report hope that the progress of the interim report through the Bureau of the Budget will be so delayed that it will not get to you, for we take the position that many of the decisions have been reached without a full and thorough investigation or comprehension of all the points at issue.

I was delighted a bit ago to hear Colonel Starbird recommend a token consideration of 400 small dams, working in conjunction with his 4 big dams. It so develops that in 1946, when the Engineers after the war were making a report and going around and sampling opinions, they seemed to us to take the position that the Susquehanna River Flood Control Association expressed the feeling of the entire area. I differ with this position and I differ strongly, because that the meetings at Williamsport and at Renovo and Clearfield—and Senator Stevenson will bear me out—there were not representatives from Curwensville or Howard.

Furthermore, the Senator is giving us a pat on the back in some consideration, but he has not told you that a lot of the trouble at Lock Haven—and that is where the reference and the importance is placed—we are not here to stress any of the spectacular effects of floods. You have that in the record and it has already been testified to. When a community recognizes that a proposal is made that is the first concrete and constructive proposal, and especially when it is federally sponsored, they are going to grab at it, and that is the position of the proponents.

Now, the opponents take the position that every less expensive means should be perfected and applied before they go into the destructiveness of these three large dry dams as recommended.

The area that is affected here is agricultural and industrial. In the Howard area you have thirty-odd farms affected. That area which is affected is the second largest agricultural area in Centre County.

Centre County is an area that has one-quarter of its land taken over by the State. We do not get a significant tax return from that area. Now here comes a Government bureaucracy and tells us that they are going to destroy one of our tax revenue areas. So we raise our voices in protest against it.

We have seen them move into an area in the western part of our State around Blairsville in Indiana County, and the benefits they got there are negligible compared to the disadvantages.

The Corps of Engineers brought out a point about construction that has gone on at Williamsport and at Sunbury, and I do not know whether the Corps of Engineers has taken a deduction in the amount of cost of that $21 million that you people in the Senate have already appropriated. If you deduct the expenses of the wall at Williamsport, and the wall at Sunbury, and the snagging and dredging project at Milton, and the channel deepening contemplated at Muncy, I am reasonably certain if you do not pad your figures, Colonel, you will get a figure that will show the costs outrunning the benefits.

I am trying to say the Corps of Engineers recognize the importance—and I am an alumnus of it—the importance of small dams. I am a believer in the theory of the small dams. I believe if we were allowed to construct several small dams in this area to prove our contentions, you economy-minded Congressmen would be very loath to appropriate the $68 million that the Corps of Engineers is asking here.

Senator Stevenson brought forth the location of these dams. Senator Stevenson said that these locations were not of their selection. Yet I believe if you review the interim reports, you will see at the Williamsport meeting in 1946 a Mr. Allison, who was secretary of the association at that time, presented a chart showing twenty-four-odd locations for dams, among which were these that were taken.

Another feature is that the Congress has recognized the fact that these projects should be self-liquidating. That is the reason why back in the 1946 report they recommended a multiple-purpose dam at Keating. That dam was 410 feet high, of which 22 feet were allocated for flood control and the balance for hydroelectric power. Yet my brother engineers know perfectly well that the hydrographs of stream flows in Pennsylvania will not maintain uniform flow for a major project over the years, or else we would have had one a long time ago.

Furthermore, the one at Keating would have submerged 100 million tons of coal, which is merchantable coal, in Clearfield County.

There is another item, and with a good deal of reserve I mention it. That is, in the Curwensville area it has been lately discovered that there is a very essential product there—an element in the clay. It is an element which is vital to nuclear fission, and also vital to the steel plants and vital to the refractory materials industry. If you established the Curwensville Dam that would be submerged and of no value to you, and that would be a tragedy since in some

instances we have to go away from these shores of ours in order to get it.

I would like to remind you, sir, that the position of the Curwensville Area Flood Control Association and Bald Eagle Flood Control Association relative to the interim report of the Corps of Engineers is as follows:

Under the declaration of policy contained in the acts of Congress of December 22, 1944 (ch. 665, sec. 1, 58 Stat. 887), as last amended (33 U. S. C. A. 701–1), and of June 22, 1936 (ch. 688, sec. 1, 49 Stat. 1470), as last amended (33 U. S. C. A. 701A et seq.), the said report is in violation of said declarations of policy in that:

(1) There was no finding that the Commonwealth of Pennsylvania was an "affected" State, which finding is required to be made by the Chief of Engineers, since the State of Pennsylvania lies east of the 98th meridian, the said Chief of Engineers must find that the State will be substantially affected;

(2) That there is no finding, justified by the evidence submitted to the Board of Engineers for Rivers and Harbors, that the benefits to accrue are in excess of the estimated cost because there is no reference to the cost of channel and major drainage improvements which have been installed and are being installed and constructed at Williamsport, Milton, and Sunbury;

(3) The said report fails to include a finding by said Board of Engineers for Rivers and Harbors relative to the comparison between the adverse effect of the construction of large dams at Blanchard, Curwensville, and Kettle Creek upon the lives and social security of the people living in the Blanchard, Curwensville, and Kettle Creek areas with the effect that the absence of such construction would have upon the residents of the West Branch of the Susquehanna River easterly and southerly from the area in which the said three dams are proposed to be constructed, in view of the fact that channel and major drainage improvements have been, and are being installed, at Williamsport, Milton, and Sunbury.

Consequently, the recommendation of the Board of Engineers for Rivers and Harbors is without justification under the referred to acts of Congress.

One of the reasons why we would like you to deliberate on this interim report is we feel since we have not been represented in the basic hearings that it would be quite emphatically just as well if members of the Corps and members of the Public Works Committee came into our area and met with us and looked at the site and saw the conditions there. Our citizens here in both Howard and Curwensville are in a similar position in that there is valuable tax-producing land which is being taken away from us. When that tax revenue is taken away from us those of us who are left must make it up. In the Curwensville area I was just recently told a school jointure would require, if this Curwensville Dam went in, the raising of $150,000 to cover a new jointure going into effect. In the Howard area they have lately built a new school building and it was removed from Howard because of the threat of this dam.

With the threat of these large dry dams hanging over us, real-estate values have been suffering most materially. It is to our advantage at this time to have you delay any decision that you would make. It is to our advantage to have you come and get acquainted with us

and find out that we are a God-fearing, respecting people; that we are just as earnest in helping to reach a solution to the flood control problem or the flood prevention or flood abatement problems as anyone anywhere.

The subject of flood control, I believe, is probably one of the largest issues that comes before you. It is significant that the people of this country are awakening to the potentialities. It is necessary that we we consider what the benefits are that will be gained by these retarding dams, as proposed, in that they will bring up the water table, which is a very vital necessity.

It is an established fact that where the water table has been conserved and extended, there industry follows. When you lose that water table then you have trouble.

Furthermore, the Senator made the remark that there has been nothing of significance since 1889 in the destruction of anything in the watershed, or affecting the watershed. I call your attention to the great lumbering activity that existed at the time of the War Between the States, when a lot of our hillsides were denuded. In a memorandum of protest addressed to the Board of Engineers I mentioned the subject of reforestation, and I still hold to it. I appreciate that it means at least 60 years. It is not the main item I emphasize, but one of the thoughts I want to leave with you, as I conclude, is that they have selected sites on streams without proper and due deliberation of all that was involved.

Let me take the example of Bald Eagle Creek. That flows into the Susquehhanna River below Lock Haven. If the channel of the West Branch of the Susquehanna at Lock Haven were cleaned out and if that dam they had there were knocked out and a path were cut through the island, then the water would have egress ultimately.

In addition to that, there are three other large streams or creeks in Centre County that contribute to the flow of the Susquehanna River below the site where the Corps of Engineers have selected the location of the Blanchard Dam. In addition in the Curwensville area you have almost an identical situation. There you have the main streams of the Susquehanna, butyou have Anderson Run and Curry Run. All of those streams should have been considered because they contribute to the overall flow.

If you establish the Curwensville Dam you are going to wipe out three God-fearing communities.

All of this is told in the interim report, which says that if the four flood-control dams are built it will lower the flood stage at Lock Haven by 4.8 feet. In other words, all other areas contiguous to Lock Haven are to be sacrificed for their benefit. If they are so anxious to get this relief, why have they not adopted the recommendation of the Corps of Engineers as of 1938 that flood walls be built there? We recommended that in our report last year and they have ignored that in the presentations that the press has made.

Senator BUSH. When you say "we recommended that," whom do you mean?

Mr. DENITHORN. I did in my report.

Senator BUSH. In what capacity?

Mr. DENITHORN. As a protest to the interim committee as of April 21 of last year.

Senator BUSH. Is this your last year's report?

Mr. DENITHORN. Yes, sir. This is a copy of it.

Senator BUSH. Is this in the hearings?

Mr. DENITHORN. Yes, sir.

Senator BUSH. Gentlemen, I think we will have to recess the committee until 2:30 this afternoon, at which time we will meet in the District of Columbia room on the Senate floor of the Capitol Building.

Mr. DENITHORN. May I add that there are a number of people from our community here in addition to Mr. Love and Mr. Keeler and myself? We have Mr. W. W. Confer, Mr. J. Rex Bloom from the Bald Eagle Flood Association, and Mr. Watts and Mr. Boone from the Curwensville Flood Association.

Senator BUSH. They are all in opposition to it?

Mr. DENITHORN. Every one of us is. Mr. Keeler's prime interest, sir, being a county commissioner, is that he is vitally interested in the conservation of our tax structure, which this program would upset.

Senator BUSH. Do you think this would have a deleterious effect on your tax situation?

Mr. KEELER. In the neighborhood of about $14,000 to $15,000 a year. That would be the taxes realized from 40 parcels of land.

Senator BUSH. Well, it is very hard for a committee or any member of it, when you have a strong division of opinion in an area like this—it is hard to decide.

Mr. DENITHORN. That is why I say come up and see it. We would be delighted.

Senator BUSH. I think it is a very good suggestion.

The committee will stand in recess until 2:30 this afternoon.

(Whereupon, at 12:30 p. m. the hearing was recessed until 2:30 p. m. of the same day, in the District of Columbia room, P–38, in the Capitol.)

AFTERNOON SESSION

Senator BUSH. The meeting will please come to order. We will resume the hearings where we left off, that is, to the gentleman from from Pennsylvania on the Susquehanna River project. We will listen to the proponents of this argument for 10 more minutes if they wish to use that time, and also the opponents of the argument. We will give them 10 more minutes and then proceed with another matter.

Who wishes to speak for the proponents? Congressman Bush, did you wish to speak?

Mr. BUSH. Senator, it is decided now to have 10 minutes for each side?

Senator BUSH. Yes, and no more.

Mr. BUSH. Before we left you said 15 minutes.

Senator BUSH. I am sorry, but our time is very short.

Mr. BUSH. I know how crowded you are.

Senator BUSH. When we began I told you we would not have any more time than we had this morning.

Mr. BUSH. We appreciate it.

Senator BUSH. Now you have 10 more minutes, and if you want to use it, all right.

Mr. BUSH. I would like to have the State senator, George Stevenson, continue and include some more of his thoughts for 5 minutes.

Senator BUSH. All right, sir. Will you proceed.

FURTHER STATEMENT OF HON. GEORGE B. STEVENSON, SENATOR FROM THE 26TH SENATORIAL DISTRICT OF PENNSYLVANIA

Mr. STEVENSON. When my time expired this morning there were several thoughts I wanted to advance particularly, which I got sidetracked on. One fact is that the dikes which have been built at Sunbury and at Williamsport were predicated upon the basis of a flood that I believe is 2 feet higher than the flood of 1936. An interesting thing which comes up with respect to this is the fact that in 1936, 5 days before St. Patrick's Day, when the flood came down the valley, we had a runoff flood which ran a crest of about 22 feet. Had that runoff flood combined with the big flood of 1936 it perhaps would be 4 to 6 feet over the dikes above Williamsport and Sunbury.

So I wanted to emphasize the fact that this program is supplementary to the dikes both at Williamsport and Sunbury. They need this very much in order to prevent the flood waters from going over the tops of their dikes.

Then also our program is designed to protect not one municipality, but to protect all of the municipalities and all of the farmlands stretching from up at Clearfield down through Harrisburg. There are about 15 municipalities affected, such as Clearfield, Renovo, Lock Haven, Jersey Shore, and so forth. All of these towns will share in this program. It is not simply a local application such as the building of dikes.

Another thing which necessitates the building of reservoirs is the fact that at the confluence of Bald Eagle Creek with the city of Lock Haven, from there down the river for a distance of about 30 miles has a fall of about 1½ feet per mile, which renders dredging an impossibility, and a subject that was completely studied by the Army engineers and found to be impractical.

The dikes around the city of Lock Haven were discarded by the Army engineers as not being feasible on account of the composition of the soil of that city. They would have artesian wells, and so on, coming up through the main streets of the city. So that exploded both the dredging and local application of dikes at Lock Haven.

The point I want to emphasize here is the fact that what we are striving for is protection not of any one municipality but protection of that whole area of the West Branch of the Susquehanna.

The Army engineers are flood-control engineers. It is a specialized form of engineering. We accept and believe that their findings are sound and founded in practical commonsense. Now one thing we have been rather amazed at is some of these dams have been opposed. The one at First Fork is in Cameron County, and the people there welcomed it. The dam at Curwensville the commissioners of Clearfield County were glad to O. K. The dam proposed on Kettle Creek in Clinton County has been approved by the commissioners of that county. The dam in Williamsport or Jersey Shore has been approved by the Lycoming County commissioners. We are at a loss to understand why our good neighbors, the people of Howard, should be the only commissioners in the whole area where these dams affect them, who should oppose it.

Senator BUSH. Your 5 minutes have expired.

Mr. STEVENSON. Thank you.

Senator BUSH. Does the Congressman wish to say something at this point?

Mr. BUSH. The next gentleman will be Chester Anstadt, president of the Clearfield Borough Council, 2½ minutes.

STATEMENT OF CHESTER ANSTADT, REPRESENTING VARIOUS CLEARFIELD, PA., ORGANIZATIONS

Mr. ANSTADT. My name is Chester Anstadt. The Clearfield Borough Council are very much in favor of the plans suggested by the Army engineers. I also am in a position to speak for the Clearfield Chamber of Commerce, the Clearfield School District and various social and fraternal organizations such as the Rotary Club at Clearfield, who have signed petitions which are on file with the committee.

We at Clearfield feel that we are being discriminated against by industry on account of our flood situation, and it is having an effect on our town. We certainly are 100 percent in favor of the plan as submitted by the Army engineers to this committee.

Thank you for the minute.

Senator BUSH. Thank you, sir.

Mr. BUSH. Next is Preston Davis, representative of the Northumberland County and president of the Susquehanna System Flood Control Association. It is an association which has been formed to look after the needs for flood protection in the entire valley.

STATEMENT OF PRESTON B. DAVIS, PRESIDENT, SUSQUEHANNA SYSTEM FLOOD CONTROL ASSOCIATION

Mr. DAVIS. May it please this honorable committee, I should like to say with possible contradiction that I speak for approximately 99 percent of the people in this whole watershed. We are here today after some 16 to 18 years of struggle. I do not feel qualified to pass on the technical aspects of what ought to be done for this watershed but I do feel qualified to say to you gentlemen that something has to be done promptly.

The people of this watershed are suffering beyond my words to tell you. I am satisfied, and the people for whom I speak are satisfied, that these Army engineers know what they are doing. They seem to be the best qualified men in the country to pass on a subject of this kind. They have come up with the recommendation that these three dams should be built. We accept their recommendations.

I would like to call the attention of the committee to the fact that this recommendation or these recommendations of these Army engineers have been presented to numerous governmental agencies including the highest officials of the Commonwealth of Pennsylvania, and every governmental agency which has heard this proposition up to this time has approved it in spite of all the opposition.

We realize that the construction of these dams will take some private property for public use. We feel that that is inevitable. Everytime that question arises it seems you have to weigh the benefits to those who will be helped as against the loss of those who will be hurt. We feel the equities in this case demand and allow us to respectfully ask your kindest consideration for the approval of this project.

Senator BUSH. You made one statement I would like to have you make again. You said you spoke for how many people and what percentage of the people in the area?

Mr. DAVIS. I would say safely 99 percent of the people in this watershed.

Senator BUSH. Who believe as you do about this matter?

Mr. DAVIS. Yes, sir.

Senator BUSH. Thank you. I think that just about exhausts the time for your proponents, Congressman.

Mr. BUSH. That is right, and we appreciate it.

Senator BUSH. Who wishes to speak in opposition? There was a gentleman here from the National Grange who wanted to be heard.

Mr. LOVE. Mr. Halvorson.

Senator BUSH. We will start with the opponents now and apportion them their time. All right, proceed.

STATEMENT OF LLOYD C. HALVORSON, ECONOMIST, THE NATIONAL GRANGE

Mr. HALVORSON. I have with me a letter from Beatty H. Dimit, master of the Pennsylvania State Grange, saying that the Pennsylvania State Grange is opposed to the construction of the proposed big dams by the Corps of Army Engineers on the west branch of the Susquehanna. The National Grange supports the Pennsylvania State Grange in this stand. I might add that the Pennsylvania State Grange has a membership, offhand, of 80,000 farm people.

The Grange is deeply aware of the anxiety that people, who have chosen to live in flood-vulnerable areas, face. Not only do we want to protect those who have built properties in flood-susceptible areas, but we want to obviate the danger of floods so that river areas can more fully develop their economic potential.

The Grange is dedicated to the prevention of floods, but there is more than one way to prevent floods. The way that is chosen should not only take into account the cost in dollars and cents, but also the lives of the people. To build big dams and flood large areas of good farmland is to uproot people whose economic, social, and sentimental attachments go back for generations. Big dams often wipe out or break up communities and, thereafter, some people's lives are never as happy as they would have been if this had not happened.

We believe that the small watershed approach to flood prevention not only preserves farms and communities, but that in this case it is more economical to the United States taxpayers. Furthermore, small dams hold the water where it is needed, and will do some good, like raising the water table, and providing water for sprinkler irrigation, which is being found profitable even in the East. It also assists in soil conservation better than big dams, which tend to stop the soil erosion too late, and which siltation destroys the value of these big dams.

We are not in a position to definitely say that small dams will prevent floods, but I would think that enough of them should. I am not convinced that the big dam advocates have proved otherwise. Certainly there should be conclusive proof that small dams plus other adequate soil and water conservation measures will not be adequate to prevent floods before we go spending millions of dollars for big

dams that wipe out good farmland and rural communities. We are convinced that the cost of small dams will be just a fraction of the cost of big dams, and the water will be impounded where it is needed and desired.

A small watershed bill has just recently passed the Congress and now awaits the President's signature. We should wait at least a year to see what the soil-conservation and flood-control surveys, that will be made under this bill, indicate as the flood-control potential of the small dams that could be built on the Susquehanna.

Our tax rates are now very high, and we believe it would be unwise to rush through an authorization for additional millions for big dams that have not seemed feasible or desirable for years, or at least had a low standing on the priority list.

We have three Grange members here from Pennsylvania, Mr. Harold M. Boone, Mr. W. W. Comfer and Mr. Rex X. Beloom. That indicates the trouble and distress these people would be in if these big dams went into operation.

Senator BUSH. How many members of the Grange are there in Pennsylvania?

Mr. HALVORSON. To my recollection offhand there are over 80,000.

Senator BUSH. Thank you very much.

Mr. LOVE. May I present Mr. Harry B. Keeler, county commissioner from Centre County.

Senator BUSH. Will you give your name and connection please?

STATEMENT OF HARRY B. KEELER, COMMISSIONER OF CENTRE COUNTY, PA.

Mr. KEELER. Yes, sir. Harry B. Keeler, commissioner of Centre County, with Bellefonte the county seat. We have to admit that the people from Lock Haven are very much involved in floodwaters. Of that I know. I have visited the town in 1917 and 1936 and helped to pump out many cellars. We took our fire company down there. Lock Haven and Bellefonte are only 28 miles from each other and we are very neighborly and always have been. We have gone down every time and they have come up and helped us when we needed it. We know everything they said about the floodwaters there is true, but the important point is this: It does not come from Bald Eagle Creek.

When the creek goes into the Susquehanna and runs up the river, it is going some. I have gone to help pump out cellars right across from the monument in Lock Haven, a mile and three-quarters from where the water goes into the Susquehanna.

Senator BUSH. Backed up?

Mr. KEELER. It has to back up to get there. If you can make it run uphill you are a better man than I am. I can see it pumped up here but never running uphill.

We sympathize with the people in Lock Haven. We do to the bottom of our hearts, but we do not like to see that dam in Centre County which will ruin our cemetery and the little village of Howard, of which we think an awful lot; and our dairy farms down there. Centre County is in a little bit different category. We have more State land than any two counties in the State of Pennsylvania. I would like to read to you what we have and what is taxable.

The assessed value of real estate in Centre County is $69,731,444; the value of real estate exempt is $50,842,127.

Senator BUSH. What is that $50 million figure made up of?

Mr. KEELER. I will get to that in a minute. It is next to the third largest county in Pennsylvania. The value of real estate taxable is $18,889,317. The exempt property in State College is $3,196,338 and the State-owned property on which we receive no taxes is $41,644,300, for a total exempt property in State College of $44,840,638.

The State-owned land in Centre County amounts to 139,674 acres. We have 1,146 square miles in Centre County. As I said, it is next to the third largest county in Pennsylvania.

We object to this idea of having more State land in Centre County on which no taxes can be collected on the basis of assessed valuation.

As I mentioned to you previously, the land which will be taken in this proposed dam site—on which I have papers taken from our assessed valuations in the office—is in the neighborhood of 41 parcels of land with an acreage of 5,000 acres. The valuation of what we would lose in revenue is between $13,000 and $14,000. That is including personal property tax on which you pay 4 mills as you know. We have one gentleman down there who pays plenty.

All I want to say to you is you can build all of the dams in Bald Eagle you wish—small ones and big ones. But Lock Haven will still be flooded out, because it is flooded from river waters and not from Bald Eagle Creek. I have been there and saw it with my own eyes; and if they can make water run uphill I am through. And that is what it has come to in this case.

The water goes in a mile and three quarters from that monument. We have pumped up to Glassers Lumberyard on the riverfront. I helped carry a lady out of there to the hospital in 1917.

The only objection we have to it is this: We sympathize with the people of Clinton County to the bottom of our hearts and I hope there is some way it can be remedied. I think the remedy is to dig a channel in the river and open it up so that water will go away and not back up.

I want to thank you very much and thank all of you, and hope we all can be good friends. I told you the truth.

Senator BUSH. Thank you. One minute remains.

STATEMENT OF JOHN G. LOVE, BELLEFONTE, PA.

Mr. LOVE. May I state something very briefly?

Senator BUSH. Yes.

Mr. LOVE. I am John G. Love of Bellefonte, Pa. I happen to represent the two flood associations. A statement was made by one of the witnesses for the proponents that the commissioners of Clearfield County are in favor of the construction of this dam.

May I call your attention to the record made in the hearing on April 21, 1953, on page 35 under the testimony of Mr. Wendell Watts, which states that the commissioners are not in favor of this particular method of preventing floods in Clearfield County.

Also I would like to call your honorable committee's attention to the fact that on page 114 of this same record, and page 115, we point out what we contend to be the noncompliance with the requirements

of the policy expressed in the act of Congress relative to this type of flood protection.

We appreciate the opportunity you have given us and we feel under the circumstances, with these streams coming in below the site of the Curwensville Dam and Blanchard Dam, that this matter does deserve further study and consideration by the Corps of Engineers as well as your honorable committee. We also feel about the costs of these various dikes at Milton and Williamsport and South Williamsport which eliminate those towns from any consideration—and that appears in the interim report—that that has not been given the proper consideration. Thank you.

Senator BUSH. Thank you very much. That will conclude the hearings on this item.

WEST BRANCH SUSQUEHANNA RIVER, PA. AND N. Y.

(Report of Chief of Engineers, June 25, 1954)

Location: West Branch of Susquehanna River rises in Cambria County, Pa., and flows 240 miles generally east in north central portion of the State to its junction with the North Branch at Sunbury. Drainage area is 6,990 square miles, and had a population of 381,000 in 1950.

Report authorized by: House Flood Control Committee resolution, May 29, 1946.

Existing Federal project: Authorized local protection project for Williamsport, providing 3 feet of freeboard above 1936 flood levels, is substantially complete. Project authorizations for Milton, Montgomery, Muncy, Jersey Shore, and Lock Haven, have expired due to lack of assurances of local cooperation.

Non-Federal projects: Pennsylvania has constructed a small reservoir for flood control and recreation on Little Pine Creek. It is now constructing First Fork Dam, estimated to cost $17,770,000, included in the original plan of the district engineer. State has also constructed some 60 small projects, mostly for clearing and snagging, in recent years.

Plan of improvement recommended by Chief of Engineers: Flood-control reservoirs on West Branch at the Curwensville site on Kettle Creek above the mouth, and on Bald Eagle Creek at the Blanchard site.

Estimated cost (All Federal) (February 1954 prices):

(*a*) Curwensville Reservoir	$24, 230, 000
(*b*) Kettle Creek Reservoir	15, 400, 000
(*c*) Blanchard Reservoir	22, 890, 000
Total	62, 520, 000

Local cooperation: Pennsylvania to furnish assurances satisfactory to Secretary of the Army that it will coordinate operation of First Fork Reservoir with the three recommended reservoirs, when constructed, to receive optimum system flood-control benefits.

Project economics (3 reservoirs):

	Project document	Current
Annual charges	$3, 023, 000	$3, 023, 000
Annual benefits:		
Flood control	4, 334, 000	3, 139, 000
Increase in land use	140, 000	91, 000
Total	4, 474, 000	3, 230, 000
Benefit-cost ratio	[1] 1. 44	[2] 1. 37

[1] Project ratios vary from 1.17 to 1.69.
[2] 1.17 to 1.68.

Comments of the Bureau of the Budget: Report submitted to budget on July 14, 1954.

Remarks: The three additional reservoirs recommended by the Chief of Engineers, with the First Fork Reservoir under construction by the Commonwealth of Pennsylvania, constitute an integrated system for the partial control of floods in the West Branch of the basin. They are economically justified by probable benefits as workable and interrelated units in a reservoir system designed to provide for control of major tributaries. These projects can, in the future, be supplemented by additional storage in large or small dams, as found warranted after further study.

PURGATOIRE RIVER (PICKET WIRE RIVER), COLO.

Senator BUSH. We will take up the next project which is the Purgatoire River (the Picket Wire River) in Colorado. Senator Johnson and Senator Millikin and Congressman Chenoweth are here.

Senator JOHNSON. Congressman Chenoweth who lives in the district where the project will be is going to testify on our behalf here.

Senator BUSH. Yes. Will you come forward, Congressman. We are trying to confine these statements to 10 minutes because of the very limited time we have and the large number of items that have come in. So if we ask you to be brief I hope you will not mind.

STATEMENT OF HON. EDWIN C. JOHNSON, SENATOR FROM COLORADO

Senator JOHNSON. Fine. Mr. Chairman, Senator Millikin is here and I wanted him to testify first, but I will be glad to do so and move along as rapidly as we can.

It is my earnest desire to bring to the attention of this committee the Purgatoire River project in southern Colorado.

The Purgatoire River Basin is subject historically to destructive floods. Seven major and many, many lesser floods have occurred since 1866. The estimated value of damage caused by a recurrence of the last flood is $1,907,000. The average annual flood damage within the present basin is estimated to be $226,700.

A portion of the cost of this project would be repaid to the Federal Government because the irrigation benefits would be under the jurisdiction of the Bureau of Reclamation, and the corps recommended repayment to the Federal Government of irrigation cost be established at the rate of 51 percent of the total first cost of the reservoir project within a period not exceeding 75 years.

This area has been in the throes of a depression for several years due to the closing down of the coal-mining industry. The agriculture industry has not been stabilized either, due to the lack of dependable irrigation water. Sufficient water flows directly through this basin to supply most needs, but it is floodwater runoff. If this project could be built it would reduce the damage due to floods to a minimum. Also the project would improve the agriculture of the area and the new industries which would locate there should rehabilitate this entire area. They are having a difficult time, as they are in Pennsylvania, because their coal mines have been shutting down.

Maj. Gen. S. D. Sturgis, Chief, Corps of Engineers, recently recommended the construction and maintenance of this project. The estimated cost of the project is $17 million for construction and $22,000

annually for maintenance. However, the general has this string attached to his approval:

(*a*) That local interests give assurances satisfactory to the Secretary of the Army that they will contribute in cash at the time of construction 4.5 percent of that portion of the first cost allocated to flood control, presently estimated at $372,000, and maintain the channel of Purgatoire River through the city of Trinidad.

(*b*) That repayment of the first cost allocated to irrigation, established as 51 percent of the total project cost and presently estimated at $8,732,000, and the local contribution toward annual maintenance and operation, established as 54 percent of the total cost of the project annual maintenance and operation and presently estimated at $12,000, be generally in accordance with Federal reclamation law procedures except that repayment of the irrigation first cost may extend over a period not to exceed 75 years.

(*c*) That existing authority for the construction of the local protection project at Trinidad, Colo., be abrogated at the time of initiation of construction on the dam and reservoir project.

We earnestly hope you may approve this project.

Senator BUSH. Thank you, Senator. Senator Millikin.

STATEMENT OF HON. EUGENE D. MILLIKIN, SENATOR FROM COLORADO

Senator MILLIKIN. Mr. Chairman, members of the committee, this afternoon I appear before this committee for the purpose of requesting favorable consideration on the Purgatoire River project. I earnestly hope that this project will receive prompt and favorable consideration and that when the pending legislation, H. R. 9859, is reported to the Senate for action, that the Purgatoire River project will be included therein.

This project will provide flood protection for Trinidad, Colo., and will make more water available for agricultural and industrial uses in that immediate area. I can remember when Congressman Chenoweth and Senator Johnson have had great floods down there and with loss of property and loss of life in the last big flood they had at Trinidad.

Mr. CHENOWETH. I am not sure any life was lost but I know great damage was caused. In the 1904 flood there was loss of life.

Senator MILLIKIN. Yes. This project contemplates the construction, maintenance, and operation of a dam and reservoir above Trinidad, Colo. The reservoir plan of improvement is the result of investigations conducted jointly by the Corps of Engineers and the Bureau of Reclamation. The reservoir as planned contemplates the construction of an earth dam approximately 208 feet in height above the streambed to provide for a storage capacity of 140,700 acre-feet, apportioned as follows: Flood control, 46,700 acre-feet; conservation, 55,000 acre-feet; and sediment retention, 39,000 acre-feet.

This reservoir, when completed, will make a substantial contribution to the economy of the area and will afford extended protection to both city and rural areas by control of floods. I wish to call to the attention of members of this committee a fact which could affect our national defense and security. I am informed that in the event of a rush of floodwater from the Purgatoire River into the basin, that such a flood would cover the main-line tracks of two of the Nation's important western railroads which operate from Denver, Colo., to points within the State of Texas. The railroads are the Santa Fe and the Colorado & Southern.

Availability of irrigation water is of great importance in our Western States. Completion of the Purgatoire River Reservoir would regulate the water of the river and would make available a large quantity of water which could supply many farmers cultivating thousands of acres of irrigated lands within the surrounding area of this project. It is important that water be made available for agricultural and industrial uses.

In that area almost all crops are raised by means of irrigation. I am informed that dry farming represents less than 1 percent of the agricultural developments. Expansion of the agricultural area and its economy necessitates an increase in available irrigation water.

In my opinion, construction of the reservoir will provide the necessary water for such expansion.

Streamflow of the Purgatoire River is erratic and unseasonable for timely irrigation use. It should be noted that existing storage and regulatory facilities are inadequate for complete regulation of the available water supply to permit maximum crop utilization within the area.

The people of Colorado residing in this area want flood protection, particularly in the Trinidad area. They also want conservation of flood flows for use as irrigation water. I may add that under the current practice of submitting projects such as these for the views of the States concerned, that the Colorado Water Conservation Board approved this project on June 21, 1954.

I wish to express my appreciation to the chairman and members of the committee for consideration of this project for inclusion in the pending legislation.

Thank you. Mr. Chairman, I think this is a most worthwhile project and has been long pending. I am not critical. It is overdue, but it has been kicking around from department to department while the need for it has enhanced rather than depreciated. I hope the committee will look upon this appropriation with favor.

Senator BUSH. Thank you, Senator. We will hear from Congressman Chenoweth at this time.

STATEMENT OF HON. J. EDGAR CHENOWETH, MEMBER OF CONGRESS FROM THE THIRD CONGRESSIONAL DISTRICT OF COLORADO

Mr. CHENOWETH. Mr. Chairman and members of the committee, I appreciate the opportunity to appear before you in support of Trinidad, Colo., which happens to be my hometown, having been born and raised there. As a boy I can remember in 1904 the flood which did tremendous damage, and, as Senator Millikin says, took some lives. In 1942 we had another disastrous flood. The Secretary of the Army just signed this report today on this project, and as the Army engineers can tell you it is the reason why we were not able to get this before the House committee.

Senator MILLIKIN. I would like to mention an important fact, which is that the Colorado Water Board, which is our official Colorado agency in these matters, on July 14, I think it was, recommended this project strongly.

Mr. CHENOWETH. That is the board that gives official approval for State projects.

Senator MILLIKIN. That is right.

Mr. CHENOWETH. Originally the Army Engineers recommended a channel job for the city of Trinidad of about $1 million. The irrigators below Trinidad in this valley below thought they should have some supplemental water for irrigation and after the 1942 flood it was rereferred to the Army Engineers and they now present a favorable report on a $17 million project to be divided equally between flood control and irrigation.

Of course, the irrigation will be repaid by the irrigators who will pay for the amount of water they use.

Senators Johnson and Millikin discussed and described the project and called your attention to the urgent need for it. I will certainly appreciate your favorable consideration and I hope it may be included in the bill.

Thank you very much.

Senator BUSH. Thank you very much indeed. Would the Engineers like to make a statement on this? Thank you very much, Senators and Congressman Chenoweth. It is seldom the committee has such a high degree of qualification on a project.

Colonel STARBIRD. The Purgatoire River is a south bank tributary of the Arkansas. It is about 186 miles long and drains an area of 3,500 square miles. The Arkansas, of course, flows on toward the east.

The total population of the basin is about 25,000 individuals. Of that 25,000, 20,000 live in the city of Trinidad. There are about 20,000 acres of land under irrigation, and those are generally just below the city of Trinidad. As was mentioned, there is an authorized project for channel improvement through the city of Trinidad, and the objections to that channel have also been brought out.

There has been constructed in an area to the northwest of Trinidad a small reservoir for irrigation purposes. However, that reservoir has filled to the extent of about half of its capacity by siltation and it is now considered inadequate. It is still decreasing in capacity.

As brought out, the reservoir recommended is a 140,000 acre-foot structure which will cost $17 million. Of those $17 million over $8 million would be repayable over a period of 75 years in view of the irrigation storage involved in the structure.

The Chief of Engineers has recommended construction of the structure. The benefit-cost ratio of the project is 1.07 to 1.

There are certain conditions for the operation with respect to irrigation and storage which I shall not mention, but with which the Department of the Interior agrees. The report has been reviewed by various agencies. The State of Colorado, as already brought out, has concurred. The Federal Power Commission stated there is no possibility of power in the project. The Public Health Service concurred with the project.

The State of Kansas, downstream, was asked to comment but has as yet not furnished us its comment. The Department of the Interior was asked to comment. They have two comments that are pertinent and should be noted by the committee.

First is a comment to the effect that, in view of the fact that the operation for irrigation purposes would be most complex, the operation and maintenance of the project should be taken over by the Depart-

ment of the Interior. In an answering letter the Chief of Engineers has said that the benefits and the storage for irrigation will be less than 50 percent of the total. Therefore, he feels that the Corps of Engineers should operate the project, but he does feel that the irrigation repayment contracts should be made by the Bureau of Reclamation with the interests concerned.

The second comment made by the Department of the Interior is to the effect that there are some 500 million tons of coal in the vicinity of and directly under the reservoir area, and that arrangements should be made to prevent percolation into the veins concerned. This is but a part of a very large field, incidentally.

The Chief of Engineers has replied to that to the effect that completely sealing the area of the reservoir involved would make the project economically infeasible. He pointed out that, at the present time, the mines concerned are not being worked. He also said that to the maximum extent possible, without raising the costs appreciably, he intends to take such measures as are feasible to reduce the percolation.

The Bureau of the Budget has not yet had an opportunity to review the report.

Senator BUSH. Thank you very much.

Senator HOLLAND. A question.

Colonel STARBIRD. Yes, sir.

Senator HOLLAND. How many mines that have been operated in the past would be flooded out by this?

Colonel STARBIRD. I cannot tell you exactly, but I will try to get it and put it in the record.

Senator HOLLAND. And you can give us the approximate tonnage involved?

Colonel STARBIRD. I think I can get it, sir.

(The information is as follows:)

Two large mines are now active upstream of the reservoir area, but these will not be damaged. Two other large mines, which became inactive in 1931, are downstream of the dam site and might be influenced by percolation. Several small workings have existed in the reservoir area, but all activity there was terminated prior to 1931.

Senator HOLLAND. Would there be damage suits in connection with that?

Colonel STARBIRD. In connection with the purchase we have made estimate of around $160,000 for payment for the lands and damages that would be involved.

Senator HOLLAND. You mean $160,000 for just the payment on the coal-mine damages?

Colonel STARBIRD. No, sir.

Senator HOLLAND. Or does it include the surface also?

Colonel STARBIRD. Yes, sir. That is the whole thing.

Senator HOLLAND. The surface and underground damage?

Colonel STARBIRD. Yes, sir.

Senator HOLLAND. How large approximately is the reservoir?

Colonel STARBIRD. It is 2,470 acres at maximum pool level.

Senator HOLLAND. Has the Board of Engineers for Rivers and Harbors approved the project?

Colonel STARBIRD. Yes, sir.

Senator HOLLAND. Do we have the opinion of the Board approving the project?

Colonel STARBIRD. You do not have it, but it is with the report. The report is en route to the Bureau of the Budget now.

Senator HOLLAND. You do not know whether this will receive the approval of the Bureau of the Budget?

Colonel STARBIRD. We do not know. The Bureau of the Budget gets an informal copy at the time we forward the report to the interested States and other Federal agencies. The Bureau normally does not comment until it receives the official comments.

Senator HOLLAND. I notice on the map this black line which is a line running northwardly from the area which would probably be covered by the water. The wording appears, "Relocation of Colorado 12." What is the significance of that wording?

Colonel STARBIRD. It is a highway relocation of Colorado State Highway 12; the relocation of this highway to a new location out of the reservoir.

Senator HOLLAND. And the complete relocation from Trinidad to the other end of the reservoir is one of the costs involved?

Colonel STARBIRD. Yes, sir. As is part of the relocation of the railroad.

Senator HOLLAND. Does the State highway department undertake the relocation?

Colonel STARBIRD. No, sir. It is done at Federal expense and is a part of the cost of the reservoir as I gave it.

Senator HOLLAND. Is it not customary for the relocations of highways to be undertaken by the States?

Colonel STARBIRD. It is for local protection works. It is not for reservoirs normally.

Senator HOLLAND. What is the cost of the relocation of the highways there?

Colonel STARBIRD. I will have to get that also from the report.

Mr. JONES. The railroad relocation will be $3,240,000, highway relocation $870,000, and utilities relocation will be $1,080,000.

Senator HOLLAND. Why was the channel through Trinidad abandoned?

Colonel STARBIRD. I believe the reason for abandonment was explained by Senator Millikin. It was not desired in view of the fact that it would further expedite the outflow of water from the area. This is the preferable solution of storing the excess water wasted for irrigation purposes.

Senator HOLLAND. But the cost of that was only $1 million.

Colonel STARBIRD. Yes, sir.

Senator HOLLAND. And the cost of the flood-control features of this would be over $8 million.

Colonel STARBIRD. The cost was $1 million at the time of authorization around 1944. I believe the current estimated cost is around $2,500,000.

Senator HOLLAND. And the cost of the flood-control features of the project alone, which you reported on, are around $8 million?

Colonel STARBIRD. About $8 million. Right, sir. Of course the floodway would only give protection to this area, and not the agricultural areas downstream.

Senator HOLLAND. At whose cost are the lands being taken which will be involved in this?

Colonel STARBIRD. By the Federal Government.

Senator HOLLAND. The cost of the surface inundated and other rights of way will be how much?

Mr. JONES. The lands are around $2 million.

Senator HOLLAND. And the minerals?

Mr. JONES. That includes the minerals. Yes, sir.

Colonel STARBIRD. Does it break lands down from the damages?

Mr. JONES. No.

Colonel STARBIRD. That is all-inclusive of lands and damages.

Senator HOLLAND. Thank you, sir.

Senator MILLIKIN. Mr. Chairman, I would like to include at the conclusion of my own remarks a report of the Chief of Engineers on this project and the study he has made of it.

Senator BUSH. Without objection it is so ordered.

(The report is as follows:)

DEPARTMENT OF THE ARMY,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington 25, D. C.

Subject: Purgatoire River, Colo.
To: The Secretary of the Army:

1. I submit herewith for transmission to Congress the report of the Board of Engineers for Rivers and Harbors in response to resolution of the Committee on Flood Control of the House of Representatives, adopted March 20, 1945, requesting the Board to review the report on the Purgatoire (Picketwire) River, Colo., published in House Document 387, 78th Congress, 2d session, with a view to determining whether any modification of the recommendation contained therein should be made at this time in order to provide flood protection for Trinidad, Colo., and at the same time make more water readily available for agricultural and industrial uses.

2. After full consideration of the reports secured from the district and division engineers, the Board recommends that the authority for the local protection project at Trinidad, Colo., be rescinded, and in lieu thereof that the Purgatoire River, Colo., be improved in the interest of flood control and irrigation by construction, maintenance, and operation by the Corps of Engineers of a dam and reservoir above Trinidad, Colo., at about river mile 161, generally in accordance with the plans of the district engineer and with such modifications thereof as in the discretion of the Chief of Engineers may be advisable; at an estimated cost of $17 million for construction and $22,000 annually for maintenance and operation; provided: (*a*) That local interests give assurances satisfactory to the Secretary of the Army that they will contribute in cash at the time of construction 4.5 percent of that portion of the first cost allocated to flood control, presently estimated at $372,000, and maintain the channel of Purgatoire River through the city of Trinidad; (*b*) that repayment of the first cost allocated to irrigation, established as 51 percent of the total project cost and presently estimated at $8,732,000, and the local contribution toward annual maintenance and operation, established as 54 percent of the total cost of the project annual maintenance and operation and presently estimated at $12,000, be generally in accordance with Federal Reclamation law procedures except that repayment of the irrigation first cost may extend over a period not to exceed 75 years; and (*c*) that existing authority for the construction of the local protection project at Trinidad, Colo., be abrogated at the time of initiation of construction on the dam and reservoir project.

3. After due consideration of these reports, I concur in the views and recommendations of the Board.

S. D. STURGIS, Jr.,
Major General, Chief of Engineers.

CORPS OF ENGINEERS, UNITED STATES ARMY,
BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
Washington 25, D. C., March 26, 1954.

824.02 (Purgatoire (Picketwire) River, Colo.).
Subject: Purgatoire River, Colo.
To: The Chief of Engineers, Department of the Army.

1. This report is submitted in response to the following resolution adopted March 20, 1945:

"*Resolved, by the Committee on Flood Control, House of Representatives,* That the Board of Engineers for Rivers and Harbors created under section 3 of the River and Harbor Act approved June 13, 1902, be, and is hereby requested to review the report on the Purgatoire (Picket Wire) River, Colorado, published in House Document Numbered 387, Seventy-eighty Congress, Second Session, with a view to determining whether any modification of the recommendation contained therein should be made at this time in order to provide flood protection for Trinidad, Colorado, and at the same time make more water readily available for agricultural and industrial uses."

2. Purgatoire River, formed by the confluence of North and Middle Forks in the Culebra Range of the Rocky Mountains in southeastern Colorado, flows 186 miles northeasterly to the Arkansas River near Las Animas, Colo. This report covers the upper Purgatoire River watershed above the mouth of San Francisco Creek, at mile 122. The area includes the city of Trinidad, Colo., at mile 157. Important tributaries above San Francisco Creek include Wet, Zarcillo, Burro, Lorencito, Long, Raton, and Reilly Canyons; South Fork; and Chicosa and Frijole Creeks. The terrain is rugged and mountainous west of Trinidad and a rolling plains area east of Trinidad. Elevations range from more than 14,000 feet at Trinchera Peak in the Culebra Range to about 6,000 feet at Trinidad and 4,000 feet in the lower plains region. The drainage area near the river mouth is 3,511 square miles and above the confluence of and excluding San Francisco Creek, 1,159 square miles. An authorized Federal project provides for local flood-protection works consisting of levees and channel improvement at Trinidad. No construction has been performed on this project. The federally constructed and operated John Martin Dam and Reservoir for flood control and conservation is on the main stem of Arkansas River just below the mouth of Purgatoire River. Emergency protection for the abutment of Animas Street Bridge in Trinidad was provided by the United States in 1950. Local interests have performed some rectification work in the channel through Trinidad. The population of the basin in 1950 was 25,464 of which 20,000 were in the metropolitan area of Trinidad. Agriculture and coal mining are the principal activities in the upper basin. Crops are raised almost entirely by means of irrigation, with dry farming representing less than 1 percent of the agricultural developments. Coal mining has decreased in the last several decades but it is now believed to have stabilized. Precipitation averages 16.8 inches annually at Trinidad and 22.3 inches at North Lake in the mountainous headwaters.

3. The basin is subject to destructive floods. Within the area under consideration, damage is largely concentrated in the 39-mile reach between mile 161, about 4 miles above Trinidad, and San Francisco Creek. Seven major and numerous lesser floods have occurred within this reach since 1866. The maximum recorded flood occurred on September 30, 1904, with a discharge of 45,400 cubic feet per second at Trinidad. This flood affected 370 acres of urban residential, business, railroad, and industrial properties, and 4,580 acres of rural lands. The estimated value of property that would be inundated by a recurrence of the 1904 flood is $8,801,000 of which $561,000 is for agricultural lands and facilities, $6,029,000 for transportation facilities and utilities, and $2,211,000 for urban property. Damages which would be caused by such a flood are estimated at $1,907,000. Average annual flood damages with the present state of development are estimated at $226,700.

4. Irrigation improvements are largely concentrated in the Sunflower Valley and Model areas between Trinidad and San Francisco Creek. About 19,500 acres are presently irrigated within this reach. Irrigation storage reservoirs consist of Model Reservoir on Chicosa Creek with a usable capacity of less than 10,000 acre-feet and a storage right of 20,000 acre-feet, and Johns Lake with a storage right of 345 acre-feet, which has not been used for many years. Several small reservoirs for municipal water supply are located in the upper basin. The flow of Purgatoire River through Trinidad consists of a relatively low base flow, spring runoff from snow-melt, and flows from intense summer storms. The average annual discharge at Trinidad for the period 1925 to 1949 is 65,100 acre-feet. Of

this flow, an average of 54,000 acre-feet annually has been diverted for irrigation use and an additional 500 acre-feet diverted from Chicosa Creek and small arroyos. Stream flow is erratic and unseasonable for timely irrigation use. Existing storage and regulatory facilities are inadequate for complete regulation of the available water supply for maximum crop utilization.

5. Local interests desire flood protection, particularly at Trinidad, and the conservation of flood flows for irrigation use. Various solutions are suggested, including regulatory dams in Burro, Zarcillo, Lorencito, and Wet Canyons and construction of a dam and reservoir in Long Canyon near its mouth with a small dam on the main stem and accessory structures to provide for diversion into the Long Canyon Reservoir. Numerous farmers request provision of controlled river flow so that effective bank protection could be installed. It is claimed that inadequate water supply is a cause of population decline and provision of reservoirs for storage of floodwaters for irrigation use would stabilize the farm economy. Local interests state they will participate in the construction cost to the extent of their ability if flood waters are conserved for irrigation.

6. The district engineer states that the most serious flood problem area on Purgatoire River is in the city of Trinidad. The locally constructed floodway through Trinidad is inadequate to pass major floods. Construction of the authorized Federal flood-control project would provide local protection against a flood somewhat greater than the maximum of record but would not protect the agricultural areas nor provide for storage and reregulation of floodwaters for agricultural use. The district engineer finds that small reservoirs on the tributaries are uneconomical and that complete protection can be afforded only by control on the main stem. Investigation shows that single-purpose reservoirs either for irrigation or flood control cannot be justified. The district engineer presents as the most suitable plan one providing for a dam and reservoir on the main stem of Purgatoire River at mile 161. The total storage capacity would be 140,700 acre-feet, of which 46,700 is allotted to flood control, 55,000 to conservation, and 39,000 to sediment control. He has coordinated the irrigation aspects of the plan with the Bureau of Reclamation. To obtain maximum beneficial use of the irrigation storage the Bureau of Reclamation suggests five basic operating conditions as follows:

(*a*) Transfer of the storage decree of the Model Land & Irrigation Co., for 20,000 acre-feet annually, from the present site to the proposed Trinidad Reservoir.

(*b*) Storage in Trinidad Reservoir of flood flows originating on Purgatoire River above the dam site which would otherwise spill from John Martin Reservoir.

(*c*) Storage in Trinidad Reservoir of the winter flows of Purgatoire River historically diverted for winter irrigation of project lands.

(*d*) Regulation in Trinidad Reservoir of summer flows historically diverted to project lands, provided that future streamflow records disclose such further regulation would not materially decrease depletions or that any material increase in depletions be compensated by suitable replacement to lands served by John Martin Reservoir.

(*e*) Storage in Trinidad Reservoir of all flood flows originating on Purgatoire River above the reservoir other than those specified in condition (*b*), provided that suitable replacement is made to John Martin Reservoir to the extent that such storage in Trinidad Reservoir would result in material depletion of the inflow from Purgatoire River into John Martin Reservoir and interfere with its operation as established by the Arkansas River compact.

The district engineer states that operation of the irrigation capacity in accordance with conditions (*a*), (*b*), and (*c*) can be accomplished under existing Colorado law and the Arkansas River compact and will not significantly deplete the water supply presently available to water users downstream from the project area. He further states that the effects of the operation of the conservation capacity in accordance with conditions (*d*) and (*e*), on the utilization of John Martin Reservoir for irrigation under the terms of Arkansas River compact are indeterminate from existing streamflow records. The district engineer estimates the total first cost of the dam and reservoir project at $17 million, at November 1952 price levels, and the annual charges at $552,000, including $22,000 annually for maintenance and operation. Annual benefits projected over the project life are evaluated at $590,000, of which $275,000 is from flood control including $26,000 due to land enhancement, $290,000 from irrigation with operation in accordance with conditions (*a*), (*b*), and (*c*), $13,000 from fish and wildlife, and $12,000 from recreation. The benefit-cost ratio is 1.07. The district engineer recommends that the authority for the existing project be withdrawn; that Trinidad Dam and Reservoir project

on Purgatoire River, Colo., be constructed by the Corps of Engineers; that the United States contribute to the maintenance and operation of the reservoir project, in proportion to the storage allocated to flood control, at an estimated annual cost of $10,000, provided that about 46,700 acre-feet of flood-control storage be reserved in the reservoir above elevation 6,251, and this storage be operated in accordance with regulations prescribed by the Secretary of the Army; and that prior to the start of construction contracts be negotiated between the United States and a legally organized conservancy district for the delivery of the water supplies at equitable charges which would pay annual irrigation, operation, maintenance, and replacement costs, estimated at about $12,000, and retire without interest all first costs of construction allocated to irrigation estimated at about $8,732,000, such annual charges to be within payment capacity of the water users and related to water supplies and agricultural prices. Further, the district engineer concurs in certain recommendations furnished him by the Bureau of Reclamation.

7. The division engineer considers that the estimates of economic justification pertaining to the irrigation aspects of the proposed plan of improvement and the anticipated fulfillment of the monetary repayment obligation involved therein to be the full responsibility of the Bureau of Reclamation. With that understanding, he concurs generally with the district engineer in recommending the construction by the Corps of Engineers of the multiple-purpose reservoir, in lieu of the authorized channel project, provided that, with reference to the allocation of reservoir costs as a basis for establishing required cost reimbursements, repayment to the Federal Government of irrigation costs incurred be established as 51 percent of the total first cost of the reservoir project within an amortization period not exceeding 75 years. The division engineer further recommends that the Trinidad Reservoir be operated under the custody of the Corps of Engineers; that the United States contribute to the maintenance and operation of the reservoir for the useful life of the project in an amount not exceeding 46 percent of the total cost of maintenance and operation, the remaining 54 percent to be paid annually by a conservancy district; and, as a prerequisite to the initiation of construction of the reservoir, that contracts be signed between the United States and a legally organized conservancy district representing overall the project water uses in the interest of water conservation, and that local interests give assurances satisfactory to the Secretary of the Army that they will maintain the channel of the Purgatoire River through the city of Trinidad. The division engineer further recommends that action to rescind the existing authorization of the channel improvement project not be taken prior to the initiation of construction of the reservoir project as herein recommended.

8. Local interests were informed of the recommendations of the reporting officers and given an opportunity to present additional information to the Board. Careful consideration has been given to the communications received.

VIEWS AND RECOMMENDATIONS OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS

9. The Board of Engineers for Rivers and Harbors concurs in general in the views of the division engineer. Additional improvements for the control of floods and development of water resources are needed on Purgatoire River in the vicinity of Trinidad, Colo. Since the authorized local protection project will not accomplish all of the desired results, a more comprehensive plan is necessary. The Board considers that the plan of improvement recommended by the reporting officers is suitable and will provide for the beneficial use of the limited water supply in the upper basin. The Board notes that land-enhancement benefits amounting to $26,000 annually will accrue as a result of the flood-control features of the improvement. In accordance with existing policy in cases of this nature, local interests should be required to contribute toward the first cost allocated to flood control an amount determined by the relationship of land-enhancement benefits to total flood-control benefits. Their contribution on this basis should be 4.5 percent of the first cost allocated to flood control, presently estimated at $372,000. The division engineer advises that local interests indicate they will make every effort to meet the requirements of local cooperation including such a cash contribution if necessary. The Board also notes that the estimated Federal cost for the local protection works at Trinidad was $909,000 at the time of authorization. The total cost of the proposed reservoir project is $17 million of which $8,268,000 is a nonreimbursable amount allocated to flood control and $8,732,000 is a reimbursable sum allocated to irrigation. With $909,000 previously authorized and $372,000

required as a cash contribution, the additional cost to the United States for the flood-control portion of the project is $6,987,000. Repayment of the portion allocated to irrigation should be generally in accordance with Federal reclamation law procedures except that the repayment may extend over a period of not more than 75 years. The benefits from the proposed improvement are sufficient to justify the required expenditures.

10. Accordingly, the Board recommends that the authority for the local protection project at Trinidad, Colo., be rescinded, and in lieu thereof that the Purgatoire River, Colo., be improved in the interest of flood control and irrigation by construction, maintenance, and operation by the Corps of Engineers of a dam and reservoir above Trinidad, Colo., at about river mile 161, generally in accordance with the plans of the district engineer and with such modifications thereof as in the discretion of the Chief of Engineers may be advisable; at an estimated cost of $17 million for construction and $22,000 annually for maintenance and operation; provided: (*a*) that local interests give assurances satisfactory to the Secretary of the Army that they will contribute in cash at the time of construction 4.5 percent of that portion of the first cost allocated to flood control, presently estimated at $372,000, and maintain the channel of Purgatoire River through the city of Trinidad; (*b*) that repayment of the first cost allocated to irrigation, established as 51 percent of the total project cost and presently estimated at $8,732,000, and the local contribution toward annual maintenance and operation, established as 54 percent of the total cost of the project annual maintenance and operation and presently estimated at $12,000, be generally in accordance with Federal reclamation law procedures except that repayment of the irrigation first cost may extend over a period not to exceed 75 years; and (*c*) that existing authority for the construction of the local protection project at Trinidad, Colo., be abrogated at the time of initiation of construction on the dam and reservoir project.

B. L. ROBINSON,
Major General, Chairman
(For the Board).

PURGATOIRE RIVER, COLO.

(Report of Chief of Engineers, July 22, 1954)

Location: Purgatoire River, formed by the confluence of North and Middle Forks in the Culebra Range of the Rocky Mountains in southeastern Colorado, flows 186 miles northeasterly to the Arkansas River near Las Animas, Colo.

Report authorized by: Resolution of the Committee on Flood Control of the House of Representatives, adopted March 20, 1945.

Existing project: An authorized Federal project provides for local flood-protection works consisting of levees and channel improvement at Trinidad. No construction has been performed on this project.

Plan of recommended improvement: Provides for rescission of the authority for the local protection project at Trinidad, Colo., and in lieu thereof that the Purgatoire River be improved in the interest of flood control and irrigation by construction, maintenance, and operation by the Corps of Engineers of a dam and reservoir above Trinidad, Colo.

Estimated cost:

Current (November 1952 price levels):

Federal	$7,896,000
Non-Federal	9,104,000
Total	17,000,000

Local cooperation: Contribute in cash at time of construction 4.5 percent of that portion of first cost allocated to flood control, presently estimated at $372,000; maintain channel of Purgatoire River through Trinidad; repay first cost allocated to irrigation, established as 51 percent of total project cost and presently estimated at $8,732,000; contribute toward annual maintenance and operation an amount presently estimated at $12,000.

Project economics:	*Current*
Annual charges	$552,000
Annual benefits	590,000
Benefit-cost ratio	1.07

Comments of the Bureau of the Budget: Submitted to Budget July 23, 1954. Comments not received as of July 26, 1954.

Senator MILLIKIN. I would like to say to the Senator from Florida, that the whole country is underlain with coal. The chief difficulty is not in finding coal but in finding a market for it. The mines have closed down wholesale, which has not only been a bad thing from the standpoint of the mines, but the whole area has been pinched financially and there is great distress in some parts through the unemployment of miners.

This will be a great thing not only initially, but this project will help the economy because not being able to work for coal mines they have had increasing dependence on agriculture.

Senator BUSH. Thank you very much.

Senator MILLIKIN. Thank you very much, Mr. Chairman.

Mr. CHENOWETH. Mr. Chairman, I would like to include my prepared statement in the record.

Senator BUSH. Without objection it is so ordered.

(The prepared statement of Mr. Chenoweth is as follows:)

STATEMENT OF HON. J. EDGAR CHENOWETH, MEMBER OF CONGRESS, THIRD DISTRICT OF COLORADO, IN SUPPORT OF PURGATOIRE (PICKET WIRE) RIVER PROJECT, COLORADO

Mr. Chairman, I appreciate the opportunity to appear before your committee in support of the Purgatoire (Picket Wire) River project located at Trinidad, Colo.

The report on this project was signed by the Secretary of the Army today, July 23, 1954, and has been delivered to the Bureau of the Budget. I might state that the Army engineers have been investigating this project for a number of years, and have now submitted a favorable report on the same.

This project is a flood-control project to protect the city of Trinidad, Colo. It will also provide for supplemental water for irrigation. The investigation was made jointly by the Corps of Engineers and the Bureau of Reclamation.

The reservoir as jointly planned entails the construction of an earth dam approximately 208 feet in height above the stream bed to provide for a total storage capacity of 140,700 acre-feet, apportioned as follows: Flood control, 46,700 acre-feet; conservation, 55,000 acre-feet; and sediment retention, 39,000 acre-feet.

The reservoir so conceived would contribute comprehensively to the present and anticipated future economy of the area as a whole and from the standpoint of flood control, in comparison with the authorized channel improvement, would afford extended protection to both urban and rural areas by the control of potential floods larger than major floods of record but from a contributing area somewhat less than that at Trinidad as is indicated by the relative locations of the floodway through the city and the proposed dam site. With reference to the conservation aspect of the reservoir improvement, the regulation of the waters of the Purgatoire River as planned would provide a well-regulated water supply for the many thousands of acres of irrigated land in the project area.

The first cost of the project is estimated at $17 million and will be constructed at Federal expense. This project is in lieu of a channel project through the city of Trinidad which has been heretofore authorized by Congress.

Mr. Chairman, I hope that your committee will approve this project and include same in the omnibus rivers and harbors bill which you will consider shortly.

PROJECT AT ST. LOUIS, MO.

Senator BUSH. The next item relates to St. Louis, Mo. Senator Symington is here to testify on that. Senator, will you tell us what you have to say about this matter? Do the engineers have a report on the St. Louis matter?

Colonel STARBIRD. Yes, sir.

Senator BUSH. Would you like them to report to us first, Senator?

STATEMENT OF HON. STUART SYMINGTON, SENATOR FROM MISSOURI

Senator SYMINGTON. I am in another committee across the hall and I would appreciate it if one of our more prominent citizens, Mr. Winter, who is here, could make a detailed statement with your approval and file some exhibits from some of our other prominent citizens and our Governor. If it is all right with you I would appreciate it if I could just present this short statement and then go to the other committee hearing at which I have to be to make a quorum.

Senator BUSH. We will be glad to accept your statement and put it in in full.

Senator SYMINGTON. Thank you. May I read mine? It is very short, and Mr. Winter will read his.

Senator BUSH. Yes.

Senator SYMINGTON. First, if I might, I would like to speak very briefly for a minute or so about something about which Congressman Cannon spoke to you this morning.

Thank you for the opportunity to present this statement on behalf of the flood-control reservoir on Bear Ceek in Marion County, Mo.

The Bear Creek project is designed to protect Hannibal, Mo., from the flash floods, that periodically occur in the area. Hannibal is a town of over 20,000 population, and is the largest city in northeast Missouri.

During the past 10 years 4 floods have inundated parts of Hannibal, the worst being in 1947 when damages totaled $657,000. As the city continues to grow, the damages from floods will necessarily increase unless this protection is provided.

The Bear Creek project would consist of an earth filled dam, 2,600 feet in length, with a capacity of 7,500 acre-feet.

The total cost of the project would be $2,975,700 with the Federal Government paying $2,822,200 and the local interests providing $153,500.

Congressman Cannon, in whose district this dam would be located, this morning presented a statement to this committee on behalf of its construction.

I would like to join Congressman Cannon in urging that the Bear Creek project be authorized.

Now if I may proceed to the St. Louis project.

I appreciate very much the courtesy of this committee in granting the hearing for the St. Louis flood protection project.

The Board of Engineers for Rivers and Harbors approved this plan last April 29, and Gov. Phil M. Donnelly of Missouri announced his approval just this week.

Two reaches were included in the approved plan.

Reach No. 3 protecting 2,500 acres would consist of 20,600 feet of earth levees and 19,700 feet of flood walls. The cost of this section would be $73,235,000 of which $5,785,000 would be provided by the local interests, and $67,450,000 by the Federal Government.

The plans for reach No. 4 provide for 2,757 feet of levees and 12,604 feet of flood walls. The local cost would be $1,762,000 and the Federal cost would be $45,430,000, for a total of $47,192,000. Five hundred and eighty acres would be protected.

In view of the urgent nature of this project, I feel that it should be included in this year's omnibus bill. The question is not whether there will be another flood at St. Louis. We know that sooner or later there will be. The only question is: When will it come?

Today, while the sun is shining, is the time to fix the leaky roof. It will be too late for St. Louis when the Mississippi again goes on the rampage.

In that connection I would like to bring up the Kansas City flood of 3 years ago which cost over $1 billion in property damage.

This is a $120 million project, and it is not possible to construct it overnight. Years will be required, even under the most favorable conditions.

For this reason, we urge that the project be authorized at this session of Congress. Failure to include it in this year's omnibus bill will mean delay of at least a year. This delay could well mean the loss of millions of dollars worth of property, and the endangering of many lives.

Therefore, I respectfully urge that this committee approve for authorization the plan of the Army engineers for St. Louis flood protection.

If you have any questions, Mr. Chairman, or Senator Holland, I am sure Mr. Winter will be in a better position to answer than I would be. Also I notice Congressman Curtis of Missouri's Second District, which is vitally interested in this project for flood protection, is here also, and with your approval I would like to be excused.

Senator BUSH. Thank you, Senator, Without objection, we will place in the record at this point a statement by Senator Hennings of Missouri on this subject as well as a statement by Congresswoman Leonor K. Sullivan of Missouri.

(The statements are as follows:)

TESTIMONY BY CONGRESSWOMAN LEONOR K. SULLIVAN ON MATTER OF FLOOD CONTROL FOR ST. LOUIS IN OMNIBUS FLOOD-CONTROL BILL

Chairman Bush and Senators, the witnesses who are scheduled to appear here today on the matter of flood control for St. Louis are much better equipped than I to give you all of the facts on the technical aspects of our project for the protection of St. Louis. For that reason, I am not going to pose as an expert witness on this, except to say that I do consider myself something of an expert on the human aspects of this problem—the suffering and destruction to property and the dangers to health resulting from these periodic floods. They can be prevented, and I urge this committee to help us to prevent them by approving inclusion of the St. Louis project in the omnibus bill.

As the Members may know, I introduced a bill in the House—similar to Senator Hennings' bill over here—to authorize the St. Louis project at an estimated cost of $112,880,000. It was because of the time element—and only because of that—that I could not attempt to have the St. Louis project included in the onmibus bill which was reported out by the House Public Works Committee. The necessary administrative action within the Corps of Engineers, the Department of the Army, and the State and local agencies involved, had not been completed in time for me to seek to have it included in the House omnibus measure.

Consequently, I am very grateful that this committee of the Senate is taking up the matter, and I am here to thank you for that and to urge favorable action. As I said, other witnesses can provide you all the technical detail, so I will not repeat any of that. I have brought with me copies of my bill, H. R. 9378, which I submit to you for any assistance the language of the bill may be to your committee in incorporating these provisions into the omnibus bill.

Again I want to say I appreciate your action in scheduling this matter for hearing. I want to assure you we in St. Louis are solidly behind the project. If

it is included in the omnibus authorization bill this year, it will make it possible for us in succeeding years to press for the necessary appropriations to get the work underway.

Every citizen of St. Louis who has experienced the scourge of floods firsthand will be eternally grateful for favorable action on this matter, and, believe me, I will be, too.

[H. R. 9378, 83d Cong., 2d sess.]

A BILL Authorizing the construction of certain public works on the Mississippi River for the protection of Saint Louis, Missouri

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the project for flood protection at Saint Louis, Missouri, is hereby authorized substantially as recommended by the Board of Engineers for Rivers and Harbors in the report dated April 30, 1954, at an estimated cost of $112,880,000.

SEC. 2. There are hereby authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act.

STATEMENT OF HON. THOMAS C. HENNINGS, JR., A UNITED STATES SENATOR FROM THE STATE OF MISSOURI

Mr. Chairman, I appreciate the opportunity to submit a brief statement in behalf of flood protection for the city of St. Louis, Mo. I do not intend to burden the committee with a lot of statistics but I think it may be of some interests to the committee to know that while St. Louis is the Nation's eighth largest city, it is also the largest city in the country in which no flood-protection work has been done.

The project for local flood protection at St. Louis was approved some time ago by the Board of Engineers for Rivers and Harbors. Gov. Phil Donnelly has forwarded his approval to the Chief of Engineers. Two months ago I introduced a bill, S. 3520, to authorize the construction of this project at an estimated cost of $112,880,000 in the hope that construction could be authorized during this session.

A glance at the map shows clearly that St. Louis is in a particularly vulnerable position with respect to floods, situated as it is at th every point where the Missouri and Mississippi Rivers come together. Not only is a large and important industrial area of the city subject to flood from these two sources but an area of approximately 25 acres, the site of the recently authorized Jefferson National Expansion Memorial, is also in danger. St. Louis has had repeated disastrous floods occurring in 1947, 1948, 1951, and 1952. The floods from the lower Missouri are likely to come between March and June and those from the upper Mississippi usually occur between April and June. By good fortune, St. Louis has in recent years been spared the full impact of having floods from these two sources occur simultaneously. Notwithstanding this fact, these floods which have struck the city have resulted in losses running into hundreds of millions of dollars.

The St. Louis Flood Control Association has devoted more than 6 years of work and effort in trying to secure flood protection for the city. Its members are quite realistic about the problem. They know that flood control costs money and as taxpayers they do not look with favor upon frivolous expenditures. At the same time they point out that the cost of flood protection would provide a long range saving. As matters stand now, when serious floods have occurred, the Federal Government has been forced to spend vast sums for emergency relief. Coupled with this is the fact that the Federal Treasury suffers from deductions from flood losses as well as loss of revenue where floods cause interruption of business in affected areas.

Mr. Chairman, as I stated when I introduced the bill in the Senate, I feel that there is no question that this project is both sound and necessary from an economic standpoint. I earnestly hope that this committee will give it most careful consideration and I urge upon you the authorization of this project to prevent repeated unnecessary disasters.

MISSISSIPPI RIVER AT ST. LOUIS AND VICINITY, MISSOURI

(Report of Board of Engineers for Rivers and Harbors, April 30, 1954)

Location: On west bank of the Mississippi River between miles 171 and 195 above the mouth of the Ohio River.

Report authorized by: Committees on Public Works of the Senate and House, April 20, 1948.

Existing project: None for flood control on the right bank at St. Louis; 9-foot navigation project in the Mississippi, and flood protection on opposite side of river has been authorized and constructed.

Plan of recommended improvement: Provide for construction of levees, flood walls, pumping facilities and related works for reach 3, Moline Creek to Franklin Avenue and the Chain of Rocks waterworks, and for reach 4, Popluar Street to the vicinity of Chippewa Street, to protect against recurrence of 1844 discharge (1,300,000 cubic feet per second) and stage of 52 feet.

Estimated cost:

Report (December 1952):	
Federal	$112, 880, 000
Non-Federal	7, 547, 000
Total	120, 427, 000

Local cooperation: Contribute in cash 3.6 percent of the cost of the Federal work for reach 3, estimated to be $2,500,000 based on December 1952 prices; provide all lands, easements, and rights-of-way, including land for borrow pits; make all relocations to railroads, streets, and utilities; hold and save the United States free of damages; maintain and operate the project after completion; design and construct all new drainage and sewage facilities within the limits of the protected area, without cost to United States.

Project economics:

	Report
Annual charges	$4, 964, 000
Annual benefits:	
Flood control	6, 570, 750
Increased land use	344, 250
Total	6, 915, 000
Benefit-cost ratio	1. 39

Comments of the Bureau of the Budget: Report to be submitted to Budget for review.

Remarks: (*a*) Studies by the Corps of Engineers indicate progressive changes in the stage-discharge relation, warranting design of protection against a stage of 52 feet for a discharge of 1,300,000 cubic feet per second, the estimated peak of the 1844 flood.

(*b*) The above conclusion requires that East St. Louis protection also be raised for equivalent protection, and some parts have already been built to 52-foot stage. Cost of the authorized project will be increased an estimated $14 million. The basic report and authorization for this project provided for levees "high enough to confine the probable maximum flow of the Mississippi River."

(*c*) The estimated benefits for the proposed St. Louis project exceed the costs by a substantial margin. The Governor of Missouri has informed the Chief of Engineers that he concurs with the report concerning the need for flood protection.

Senator BUSH. Congressman Curtis. Congressman, I am sorry we are limiting it to 5 minutes. Will that satisfy you?

STATEMENT OF HON. THOMAS B. CURTIS, MEMBER OF CONGRESS FROM THE SECOND DISTRICT OF MISSOURI

Mr. CURTIS. I will not even take 2 minutes. I wanted to appear personally on this project, though. In fact, I appreciate the opportunity to appear to speak in behalf of this project for St. Louis and urge that it be included in your omnibus bill. As a matter of fact it might be that we will have our bill on the floor late this evening or

possibly tomorrow, and I intend to offer an amendment which would do the same thing there. However, because we have not yet received the report from the State of Missouri, our committee was unable to consider it and, therefore, my amendment probably would not be adopted on the floor. I am simply doing that so that the House will be familiar with it and certainly so that the committee will be in the event you see fit to put it in and it will go through in conference.

I want to make the one basic statement that aside from the need involved and the fact that this is an economically justifiable project, as these flood control projects must be in order to meet with approval under our formula, I have always felt that whenever you go down a river in a flood you should not build up the levees on one side without at the same time building them up on the other side. Unfortunately that process has been following along the Mississippi River up and down it.

There are high levees that have been built and I am sure the Army engineers will point out those heights on the eastern side of the Mississippi River. The result is that industry which has been on the west side has had considerable of that water shunted over.

This is something we need. As Senator Symington said, it is something where the longer we wait the more apt we are to suffer from damaging floods. These areas have suffered particularly in the past decade. I am familiar with the damage they have received.

I think that is about all I care to say.

Senator BUSH. Thank you very much. We will stand in recess for just a few moments.

(Whereupon a recess was had.)

Senator BUSH. We will hear from Mr. Winter.

STATEMENT OF EVERETT T. WINTER, EXECUTIVE VICE PRESIDENT, MISSISSIPPI VALLEY ASSOCIATION

Mr. WINTER. Mr. Chairman, I know you are very busy and time is very short, so I will be very brief. My name is Everett T. Winter and I am vice president of the Mississippi Valley Association. The Mississippi Valley Association endorsed the St. Louis flood-control project at its 35th annual meeting in February of this year.

The Mississippi Valley Association, with membership in some 30 States of the United States, but principally in the 23 States that wholly or partially drain into the Mississippi River, is greatly concerned about the lack of flood protection at the city of St. Louis.

St. Louis is the only major city in the United States on a navigable stream that does not have any flood protection. Our people who live in Kansas City, Omaha, Memphis, Vicksburg, New Orleans, and in the cities on the Illinois and on the Ohio Rivers are very vitally concerned because this great inland port at St. Louis is without protection. We feel that perhaps we have been lulled to sleep by a false sense of security because of the great reservoir program underway in the Missouri Basin.

Great alarm, however, was expressed about the situation in St. Louis at our annual meeting, and as a result of that alarm our water resources and flood control committee, then our resolutions committee, and then the convention itself, attended by 1,007 delegates, passed the St. Louis flood-protection resolution without a dissenting vote.

Our people feel that they owe to our good neighbors and associates in St. Louis this flood protection, and then we also feel that for perhaps a very selfish reason we cannot permit the hub of our inland waterways transportation system to be jeopardized by floods. This project is way past due and the Mississippi Valley Association urges the immediate authorization of this project so that work on at least some of the reaches may be started in the near future.

Mr. Chairman, I would like also to submit for the record a copy of a telegram from the Honorable Phil M. Donnelly, Governor of Missouri, to Mr. Morton Meyer, president of the St. Louis Flood Control Association, in which the Governor approves this project.

I would like also to submit a statement by Mr. Morton Meyer, president of the flood control association; also I would like to put in the record a copy of a letter from Mr. H. L. Colwell, manager of the St. Louis plants of the Ralston-Purina Co.; also a letter by C. V. Hanna, chief engineer, Terminal Railroad Association of St. Louis, addressed to the Board of Engineers for Rivers and Harbors, relating to this project.

I would like also to place in the record a statement by the Honorable Aloys P. Kaufmann, president of the St. Louis Chamber of Commerce of Metropolitan St. Louis and former mayor of the city of St. Louis; I also like to have put into the record a letter by Mr. August A. Busch, Jr., president of the Anheuser-Busch Co., and of the St. Louis Cardinals, and also chairman of Civic Progress, Inc., a nonprofit organization in St. Louis that deals with civic problems and encourages necessary civic developments.

Senator BUSH. Without objection, your statements will all be filed and made a part of the record.

(The statements referred to are as follows:)

JEFFERSON CITY, MO.

Hon. MORTON MEYER,
President, St. Louis Flood Control Association,
Care, Senator Thomas C. Hennings, Jr.,
Senate Office Building:

I have today written Maj. Gen. S. D. Sturgis, Jr., approving, providing flood protection to the city of St. Louis.

PHIL M. DONNELLY, *Governor.*

STATEMENT OF MORTON MEYER, PRESIDENT, ST. LOUIS FLOOD CONTROL ASSOCIATION

I shall speak for an association dedicated to flood protection for the city of St. Louis and comprising approximately 125 members, many of them leading firms in the community and the Nation. A list of our members is available if you want them.

After the flood of 1947 a few of us met to discuss the damage it had caused and to ponder the more frequent recurrence of these floods. We recalled that in 1943, we had had a flood stage higher than any since 1844, the year of the greatest of them all. We had broken a 99-year record. Then came the next year, 1944, with a higher stage and we had broken a 100-year record. Three years later in 1947, we broke the 103-year record. These three floods cost the people of St. Louis an estimated $20 million.

We were startled into forming an organization when we learned from Army engineers and private engineers that under present changed conditions the same volume of water as had passed St. Louis in 1844 would cause a stage height 8 to 10 feet higher than our 1947 stage. We need only equal a record not break one to have water in our waterworks and reservoirs and a horrible disaster.

We did not know then that in 1951, we were to break the 107-year record and suffer another estimated $10 million. We do know now that in 1951, the news-

papers all over the country predicted in screaming headlines that the greatest flood in history was pouring down on St. Louis from Kansas City. And it was. But Providence spared us. Three factors in my opinion prevented the headline predictions from coming true: (1) a good many breaks occured in levees and dikes between Kansas City and St. Louis; (2) the Mississippi River was not high concurrently; and, (3) there was no local rainfall during the crest period.

Again the very next year, 1952, the Missouri River was in flood—Omaha was threatened but saved by heroic work by the Corps of Engineers. We were warned to be ready for another bad time. But the Lord caused His Countenance to shine upon us again. In the last half of April when we would normally expect a great deal of rainfall there was practically uninterrupted sunshine throughout the valley. How long can we be so completely lucky. One year our luck will run out. The unfavorable factors will bunch up and our city will be a disaster area.

We know this work will cost money. We are all taxpayers and approve no foolish or unnecessary expenditures. But the cost of building this protection is nominal compared to the cost of not building it. The design flood that may visit us any year would dwarf in cost-damage the 1951 Kansas City flood and that one is now reported to have cost a billion dollars. The Federal Treasury loses doubly in a situation like this: It foots the actual loss as deductions, and loses revenue on the interrupted earnings of the stricken area and secondly, loses by being compelled to send many millions for relief.

St. Louis is the largest city in the valley. No flood-protection work has been done there although many cities in the valley are well protected. It is the eighth largest city in the Nation and for its many important functions deserves Federal attention.

APRIL 23, 1954.

Re Flood Protection for City of St. Louis, Missouri.

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
Washington, D. C.

(Attention: Col. F. W. Falkner.)

GENTLEMEN: I am H. L. Colwell, representing Ralston Purina Co. of St. Louis. We operate a 300,000-ton-per-year poultry and livestock feed mill adjacent to the flood area of the Mississippi River.

We depend for service and grain storage upon our million-and-a-quarter-bushel elevator located on the wharf in the flood area.

We have been obliged to protect our property by sandbagging, pumping, and construction of portable floodwalls. During the past 8 years only (1944–52) these operations have cost us $77,675.

A flood stage of 34 feet at our elevator stops all operations.

From 1903 to 1927 the river reached this stage 4 times (within 24 years).

From 1927 to 1951 the river reached this stage 8 times (within 24 years).

The yearly frequency has increased 100 percent.

Should a disastrous flood occur which we could not control, our company could sustain a loss of 3.5 to 5 million dollars, depending on current inventory values at the time.

H. L. COLWELL,
Manager, St. Louis Plants.

STATEMENT BY V. C. HANNA, CHIEF ENGINEER, TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS, AND DIRECTOR OF THE ST. LOUIS FLOOD CONTROL ASSOCIATION OF ST. LOUIS, MO.

As chief engineer of the Terminal Railroad Association of St. Louis, representing that company, and as the director of the St. Louis Flood Control Association, assigned to handle the interests of the concerned railroads, I wish to express my approval of the modified plan for flood protection for St. Louis, prepared by Col. Delbert B. Freeman, and solicit the favorable review of the complete report, now under consideration by the Board of Engineers. I submit below certain facts and comments on the subject for your consideration. Throughout the remainder of this discussion, the Terminal Railroad Association of St. Louis will be referred to as "Terminal."

St. Louis, the great transportation gateway to the West, South, and Southwest, is the second largest railroad center in America. The proprietary lines of the terminal include 15 of the major railroad systems of the country, having a com-

bined mileage greater than those entering any other city in the United States. Most of these lines terminate in St. Louis, extending into the city from the South, West, and East. The terminal has interchange connections with 24 railroads, including the proprietary lines, and 2 barge lines and handles approximately 95 percent of the traffic through the St. Louis gateway, over 440 miles of its own trackage.

The extent of terminal operations, and its great civic value to St. Louis, is evidenced by the fact that all passenger trains, some 146 of them, exclusive of commuter service, which enter or leave St. Louis use Union Station as their termini, handling 2 million or more passengers a year over terminal tracks. At the various interchange points on the terminal, there is a daily interchange of from 10 to 12 thousand freight cars in each 24-hour period in addition to loaded freight cars picked up from industries and delivered to the various trunklines.

On the west side of the Mississippi in the St. Louis area, terminal serves 322 industries, for whom it handles an average of 326,000 loaded and empty cars each year. A considerable volume of traffic is also handled by the Manufacturers Railway Co., located on the west bank of the river in reach 4, and the Alton & Southern and Illinois Terminal Railroad Co. that enter St. Louis over the McArthur and McKinley Bridges respectively.

It may be readily noted from existing maps that most of the main line and yard operations of the terminal north of the Eads Bridge, including many buildings, terminal engine and shop facilities, etc., are located between Broadway and the river, completely within the reach 3 flood area. This is also true of the yards and properties of the Wabash, Rock Island, Missouri-Kansas and Texas, and Chicago, Burlington & Quincy Railroads, together with a small amount of trackage of the Missouri Pacific and Illinois Terminal. In reach 4, south of the McArthur Bridge, trackage of the Manufacturers Railway and important lines and yards of the Missouri Pacific are in a similar situation. All of these tracks and properties would be inundated to depths varying from 6.5 to 20.0 feet, in the event of a flood with river gage of 52.0 feet. The Merchants Bridge would be out of service due to floodwater over the west approach tracks, as well as the south approach of the McArthur Bridge for the same reason. This would reduce traffic over the river from east to west to such a minimum that crippling embargoes would seriously curtail movement of perishable and other fast-moving freight.

The mileage of trackage that would be under water with a flood stage of 52 feet is appalling. In this event the terminal would have 13.6 miles of main line and 39.2 miles of yard tracks under water. All of the concerned railroads, including the terminal, would have the staggering total of 38.4 miles of main lines, and 223.7 miles of yard trackage out of service. It would involve a tremendous amount of time and money to repair the widespread damage to the physical property and resume normal operations.

At this point I would call your attention to the depth of water over the tracks and properties of the terminal at the following critical points with a 52-foot gage: Levee tracks at Olive Street near Eads Bridge 19.9 feet; levee tracks at Mound Street 14.8 feet; pike yard at Chambers Street 15.9 feet; Madison and Tyler Street yards 16.9 feet; with a yard office building completely submerged; North Market Street main line 7.2 feet, levee tracks 9.6 feet; Bremen Avenue main line 11.9 feet, material yard 12.5 feet, maintenance-of-way building completely submerged, engine terminal shops and facilities with 10 feet of water over first floor; main line along McKissock Avenue (7 city blocks) 7.3 feet and Harlem yard near Carrie Avenue 6.5 feet deep on main line, in car-repair shop and other buildings. Tracks, structures and properties of the other railroads near these points and northward, including engine terminal and car-repair shops, would have a similar condition in a varying degree.

Such depths of inundation would result in tremendous damage to tracks, structures, and equipment. Attention is also called to the increased length of time required for a recession of the floodwaters from a 52-foot gage, as compared with a gage of even 47.5 feet. This would result in increased monetary loss by a large segment of employees of the railroads involved, more extensive damage to buildings and equipment, and a tremendous additional loss in revenue to the railroads, due to embargoes and interruption of service.

There has not been sufficient time to make a detailed field check and estimate of the physical damage that would be sustained by the concerned railroads under the modified plan with a 52-foot gage. However, based upon previous costs of damage at 40.28 feet in 1951, and estimated cost of damage at a future 47.5-foot gage including daily monetary loss, the entire damage and loss from a 52-foot gage might well amount to, or even exceed, $10 million.

Finally: The inundation of the entire river front area of the city for an extended period at 52-foot gage, involving the loss of a large portion of our most important railroad yards, main lines, and other facilities within the city, the reduction of the effective use of the Merchants and McArthur Bridges, the extended unemployment of a large number of our citizens, the interruption of railroad service due to crippling embargoes, the danger of the loss to the city of the Chain of Rocks water supply, the complete stoppage of production by many vital industries, the necessity of curtailment of future improvement expenditures by the railroads due to the monetary loss from flood damage, and the far-reaching and mushrooming effect of loss sustained by allied business interests over the entire St. Louis area, would indeed be a major catastrophe for the city of St. Louis, and under prevailing conditions would have a disastrous effect upon the entire community and the welfare of our citizens.

If such a flood should occur in this strategically located industrial city and railroad center, during a wartime national emergency, the results would cripple the national defense.

Gentlemen of the board, can we afford to delay any longer to provide St. Louis with adequate protection from the ever-recurring floods that have ravaged our riverfront, with devastating effect through all the years since 1844? I am hopeful, and feel confident, that you will approve the modified report, in order that it may be handled through the proper channels for final authorization by the Congress.

Respectfully submitted to the Board of Engineers for Rivers and Harbors, Corps of Engineers, United States Army.

STATEMENT BY ALOYS P. KAUFMANN, PRESIDENT, CHAMBER OF COMMERCE OF METROPOLITAN ST. LOUIS

The economic, commercial, transportation and cultural stature of metropolitan St. Louis is such that everything possible must be done to preserve it, enhance it, and insure its continued progress.

This is especially true when, as in the case of recurring floods to a considerable portion of its land area, the loss frequently attains the proportions of many millions of dollars.

It has been competently estimated—and I am sure this honorable Board is thoroughly familiar with the figures—that a recurrence of the volume of our record flood stage of 1844 would entail a loss of hundreds of millions of dollars.

That is a most serious possibility for any one community to contemplate. In recognition of it, the St. Louis district office, Army Corps of Engineers, has evolved a long-needed corrective plan now under consideration by this Board.

Because of the major, metropolitan nature of the area involved in this plan, the proposed corrective measures fall naturally into the category of great public works peculiarly within the scope of the Nation's flood-control program.

The plan has the wholehearted support of the St. Louis Flood Control Association, a valued affiliate of our chamber of commerce and an authentic spokesman for the substantial segment of our bi-State area directly affected by recurring floods.

I therefore sincerely urge most sympathetic consideration of the plan as an insurance approach to the continued normal functioning of a key metropolitan area in the economy and defense of the Nation.

APRIL 16, 1954.

BOARD OF ENGINEERS,
Washington, D. C.

DEAR SIRS: I am writing you as chairman of Civic Progress, Inc., a nonprofit corporation in St. Louis that deals with civic problems and encourages necessary civic developments.

The members of our group have considered the long-range flood prevention plans of the United States Army Corps of Engineers. We have conferred on this subject with leaders of the St. Louis Flood Control Association. We know that engineers of the city of St. Louis have examined and approved the Army engineers' plan.

At a meeting last December 4, the members of Civic Progress, Inc., voted to endorse the Army engineers' flood-wall plan "in principle." We did so after learning from Mayor Raymond R. Tucker that the city administration will,

when the funds are available, ask the board of aldermen to appropriate the city's share of the total cost of the flood-wall plan.

The members of Civic Progress, Inc., have been impressed by the potential flood dangers in St. Louis. There was, for example, a recordbreaking flood here several years ago, caused by high water on the Missouri River. Had the Mississippi River been up at the same time, the flood might have had a catastrophic effect on our city.

Sincerely,

AUGUST A. BUSCH, Jr.

Senator BUSH. Does that complete your statement?

Mr. WINTER. Yes.

Senator HOLLAND. Where is your home?

Mr. WINTER. St. Louis.

Senator HOLLAND. May we hear from the engineers?

Senator BUSH. We will hear from Colonel Starbird.

Colonel STARBIRD. Resolutions of both the Senate and the House in 1948 called for a study of the 24-mile reach of the river from the confluence of the Missouri and Mississippi south to Jefferson Barracks. That area is the area shown on this map. Those resolutions spoke only of the west bank of the river. The 24-mile reach has 19 of its miles within the city of St. Louis. You know, and so I shall not explain, that St. Louis is a major transportation center and manufacturing center of the Nation.

The flood plain along the river on the west bank varies from 5,000 feet wide to 300 feet wide, and drops to almost zero at one or two spots. With respect to the northern area generally outside of the city limits of St. Louis there is little development at present. It is an area of potential future development.

However, it is found to be an area where economic protection could not be recommended at the present time.

There is one exception, the Chain of Rocks Waterworks, where local protection has been given by the city to a limited extent. It is economical to raise the protection there. The other two reaches that were defined by Senator Symington are first a reach extending from the point where the city limits widen out down to the center of the city. Secondly, a reach below the center of the city, extending again to high land below.

There is another area subject to flooding near Jefferson Barracks—the southern end of the reach. There are five separate subareas here that could be protected. However, in the case of three of those subareas, protection is not warranted economically at the present time. The case of one of these it is borderline economically. In the case of another, protection is economically warranted, but the main business concern that would be protected does not care to endorse that protection.

The damages start when either the Missouri or the Mississippi, or the two together, bear over 700,000 cubic feet per second down the river. I say either, but it is either or both. The stage at that time is around 35 feet on the gage in St. Louis. We have had a record flood in the past, in 1844, when the flow on the river was 1,300,000 cubic feet per second. If that flood recurred at the present time we believe that the stage that would be reached would be 52 feet, in other words, 17 feet above the elevation where damage starts.

The area has a record which shows that damages occur about once every 4 to 5 years. The average annual damage in the area is around $5 million.

As has already been brought out, works have been undertaken on the east bank of the river. They follow generally parallel to the river and also give protection to a very great industrial area, the industrial area of East St. Louis, Wood River, and Prairie du Pont.

In the case of the protection of the east bank the Chief of Engineers is carrying protection to a stage of 47 feet, and some to 52 feet. We have found in recent years there has been a worsening of the ability of the river along this reach to carry its flow. The recommended protection on the west bank of the river is to a stage of 52 feet. We believe that stage would give protection against the equivalent of the record flood which would occur, we believe, with the present river condition, about once every 200 years.

At such time as we definitely establish the grade—there might be some minor variant from the grade recommended—it would be necessary, of course, to come up with the grade of the levee for protecting industrial areas on the east bank. The Chief of Engineers considers he has authority to do this, but I mention it because it definitely related and the works were mentioned by Mr. Curtis.

The overall cost of the project to the Federal Government would be $112,880,000. The cost to local interests is estimated at $7,547,000. They would be expected to furnish lands, relocations, furnish rights-of-way and protect the Federal Government against damages. They would also maintain and operate the project upon completion, contribute in cash 3.6 percent of the Federal first costs, estimated at $2,500,000, and provide new interior drains and sewers.

The project has a benefit-cost ratio of 1.39 to 1. The Department of the Interior has commented on the project, giving its concurrence. The Public Health Service has not as yet commented.

Yesterday we received the approval of the Governor of Missouri to the project. The project has not been reviewed by the Bureau of the Budget.

Senator BUSH. Any questions, Senator?

Senator HOLLAND. Yes. Off the record.

(Discussion off the record.)

Senator HOLLAND. What works are there protecting the city of St. Louis now?

Colonel STARBIRD. None except the waterworks, and there they have put in protection to a stage of 47 feet.

Senator HOLLAND. What works were put in by General Lee?

Colonel STARBIRD. I cannot answer that. The works put in originally by General Lee in the forties—do you know, General?

General ITSCHNER. I do not know.

Colonel STARBIRD. It may have been the actual navigational works in here.

Senator HOLLAND. No. Flood protection. It may have been where this Jefferson National Memorial is now.

Colonel STARBIRD. I know General Lee prepared original surveys, which you have probably seen, and they are still available.

General ITSCHNER. I think the work he did was largely snagging and clearing, rather than actual protection works.

Senator HOLLAND. You say the Bureau of the Budget has not commented on this matter?

Colonel STARBIRD. They have not. We have received the Governor's comment only yesterday, so they have not had an opportunity yet.

Senator HOLLAND. And the basis for the contribution by the local agencies is about what percentage of the total? Five percent?

Colonel STARBIRD. There is a contribution for the enhancement, and it is relatively tiny in such a built-up area. But there is a cash contribution called for on a percentage basis, of 3.6 percent for the enhancement that will occur in the northern of the two regions.

Senator HOLLAND. Is the nature of the protection masonry and concrete, or concrete and steel bulkheads with pumped-in earth back of them?

Colonel STARBIRD. No, sir. It consists of levee and wall. In addition there are certain pumping plants and pressure conduits to carry water, which otherwise would pond behind the area, through the wall, or over the levee.

Senator HOLLAND. And this project would cover the cost of installation of that pumping?

Colonel STARBIRD. The cost of installation. The maintenance and operation would be taken over by the local interests.

Senator HOLLAND. All right.

Senator BUSH. Thank you, gentlemen. That will close the hearings on that item.

ASHTABULA HARBOR, OHIO

Senator BUSH. We will take up the Ashtabula Harbor, Ohio, project.

STATEMENT OF HON. OLIVER P. BOLTON, MEMBER OF CONGRESS FROM THE 11TH CONGRESSIONAL DISTRICT OF OHIO

Mr. BOLTON. My name is Oliver Bolton, Representative of the 11th District of Ohio. This is Mr. McElroy of Senator Bricker's office with me.

I certainly appreciate this opportunity of appearing before this committee, Senator. I know this is a little bit of a strange procedure, coming here with a project in the initial stages instead of putting it in in the House, but the matter is of some urgency because of the pressure in Ashtabula Harbor. Inasmuch as it was only approved last week by the Bureau of the Budget, and the committee hearings in the House had been shut down at a time when it could have been presented, we are bringing it up here.

This is a project involving Ashtabula Harbor in Ashtabula County, Ohio, which is up in the northeastern corner of the State. It is a port of some importance, inasmuch as last year it even then exported more than 1 billion pounds of cargo that had a basic value of a little over $9½ million. It is one of the larger iron ports in the country, being, I believe, the third in tonnage on the Great Lakes.

In recent years the area between the eastern edge of Ohio and the city of Cleveland, the entire coastline, is developing as a large chemical center because of sudden discoveries of chemicals in the ground. As a result there has come into the area since just before the last war a large plant, the Electro-Metallurgical Co., which is a subsidiary of Union Carbide, and several other large plants. These plants in that area depend on large salt uses and other products which have to be shipped in by water. As a result the citizens of the area have gone ahead and pushed a large hill down into the harbor and are constructing docks, which are now under construction.

As a result of this dockage which is available it became possible for the location of a large titanium plant to be erected here, in which the Government has a very real interest. This $30 million plant is expected or hoped at least to be built in the area within the next few years.

As I said, the docks are under construction and have been built by private capital, and will be available for use in the middle or end of this shipping season. That is all except for a channel being dredged into them.

As you can see from the map, Senator, the breakwater has been built out in the past so that although there is no commitment on paper that the harbor would be extended out to where it is, all the documents going back as far as I have been able to read, at least, have indicated that the contemplated size of the harbor would include this area being dredged.

This is merely the dredging down to the established level as shown in the black there, which now serves the steel and iron docks and the coal docks, dredging down to 25 feet of earth, or 26 feet of rock.

I believe the Engineers' estimate for the cost of the project is $4,900,000 of new work, and $8,000 annually for maintenance.

The benefit-cost ratio boils down to 1.52.

This is very badly needed dredging in the area. It is a project which affects not only the city of Ashtabula and the entire coastline on either side, but also in my opinion affects a good deal of the territory to the south, which is dependent on many of its resources from this port.

Senator BUSH. Thank you very much, sir. Do you have anything you would like to add?

STATEMENT OF JOHN M. McELROY, ADMINISTRATIVE ASSISTANT TO SENATOR BRICKER

Mr. MCELROY. I would like to add Senator Bricker's endorsement of this project. I am John McElroy, administrative assistant to Senator Bricker, of Ohio. The Senator is engaged on the floor. Otherwise he would be here himself. Congressman Bolton very ably put it as to the economic need and justification for this project, and Senator Bricker endorses it all along the line.

Senator BUSH. Thank you very much.

Mr. BOLTON. Thank you, Senator.

Senator BUSH. Will the Army Engineers give us their summary of the situation, please?

Colonel ALLEN. The project at Ashtabula is a modification of the existing project. The project as now authorized provides for a 28-foot entrance depth, with varying depths from 25, 24, and 21 feet in the interior basin. Since this project was authorized and constructed, local interests have produced a pier which will be available at the end of this year and which has cost or will cost in the neighborhood of $3,700,000.

The controlling depths in this area now are from 12 to 18 feet, so that they are not enabled fully to develop the commerce which these piers require with the existing depths.

This project would modify the Ashtabula Harbor project to dredge the additional basin to serve these piers to 25 feet in earth and 26 feet in rock at a cost of $4,900,000.

The benefit-cost ratio of the project is 3 to 1. The project has been referred to all of the agencies, including the Bureau of the Budget. No agency has any objection to the submission of the report to Congress.

Senator HOLLAND. What is the tonnage handled here?

Colonel ALLEN. In 1953 it was 14,848,000 tons, which is the existing project.

Senator HOLLAND. Is it all handled at the existing docks?

Colonel ALLEN. At these piers right here.

Senator HOLLAND. What is the element of saving that is big enough to make the benefit-cost ratio 3 to 1?

Colonel ALLEN. The elements of savings were in being able to load lake carriers to a heavier draft than is now permitted with the 12 to 18 feet of depth in front of these piers. By being able to load them to their full depth it would be more economical to operate them and bring them into the piers. Also other savings would result from reduced handling costs and tug hire.

Senator HOLLAND. But those piers are not there now?

Colonel ALLEN. That is correct.

Senator HOLLAND. And therefore the traffic moving does not use them.

Colonel ALLEN. But the traffic that will use them will have to move over 12 to 18 feet of depth when they are constructed. This will produce additional commerce in the form of chemical limestone, which is not now moving into the port.

Senator BUSH. With a heavier draft?

Colonel ALLEN. Yes, sir. As well as additional commodities which are not now moving into the port.

Senator BUSH. Is that because of the greater depth that will be provided that the additional commerce will come in?

Colonel ALLEN. The additional depth plus the provision of the piers.

Senator HOLLAND. Do you mean those are commodities coming in now by rail?

Colonel ALLEN. They are coming in now by rail, or are going to come in in greater quantities by reason of the chemical development mentioned by Congressman Bolton.

Mr. BOLTON. Could I add one other point?

Senator BUSH. Yes.

Mr. BOLTON. Some of this, Colonel, particularly the salt, goes to very small piers, which are up the Ashtabula River, which is right in there. The river is silting up and the facilities back on those docks are entirely inadequate for the demands of the salt which are required now, in addition to the limestone.

As a matter of fact, if you look on the chart way up the river you will see an authorized project, which is where some of the stone has been shipped in the past, but that is silted up so badly and we have been unable to get funds, that much of that stone will be brought in to the new docks.

Senator BUSH. Thank you very much, Colonel, and Congressman Bolton.

Mr. BOLTON. Thank you, sir.

Senator BUSH. The analysis on this project will be inserted in the record.

(The analysis is as follows:)

ASHTABULA HARBOR, OHIO

(Report of Chief of Engineers, June 29, 1954)

Location: On southerly shore of Lake Erie at mouth of Ashtabula River, 59 miles east of Cleveland.

Report authorized by: House Public Works Committee resolution adopted June 24, 1953.

Existing project: Provides in general for an outer harbor protected by 2 breakwaters; an entrance channel 28 feet deep between existing breakwaters 600 feet wide, a channel 25 feet deep and 1,100 feet maximum width through outer harbor to inner east breakwater; a channel 24 feet deep to mouth of Ashtabula River, channel 24 feet deep to a point 2,000 feet upstream, channel generally 18 feet deep and to the upper car-ferry slip, channel generally 16 feet deep to the southerly end of the turning basin, a channel 16 feet deep to a point 1,550 feet upstream of the turning basin, also an approach channel 24 feet deep, with a minimum width of 250 feet from the 24-foot section of the outer harbor eastward to the New York Central Railroad Co.'s slip.

Plan of recommended improvement: Provides for modification of the existing project for the outer harbor to provide for a 700-foot-wide access channel terminating in a basin having a width of 1,200 feet and about 1,500 feet long to a depth of 25 feet in earth and 26 feet in rock; elimination of portion of existing 21-foot-depth area north of recommended approach channel.

Estimated cost:

Federal	[1] $4, 900, 000
Non-Federal	
Total	[1] 4, 900, 000

[1] Excludes $10,000 navigation aids.

Local cooperation: Provide all lands, easements, and rights-of-way; hold and save the United States free from damages; construct and maintain dock facilities open to all on equal terms; and dredge the slips and access thereto from the basin to depths for full utilization of the Federal project.

Project economics:

Project document:	*Project document*
Annual charges	$186, 000
Annual benefits: Transportation savings	562, 900
Benefit-cost ratio	3

Comments of the Bureau of the Budget: No objection to submission of report.

Remarks: Existing depths inadequate in approach to new dock facilities. Improvement will produce substantial savings to existing and prospective commerce, which has averaged about 14 million tons per year from 1944 to 1953. Principal items of present commerce are iron ore and coal; additional chemical movements are expected. Local interests are providing access roads, dock fill, and dredging estimated to cost $3,710,000.

FLORIDA WEST COAST CANAL IN THE VICINITY OF VENICE, FLA.

Senator BUSH. We will take up the Florida West Coast Canal. Mr. Peterson.

STATEMENT OF J. HARDIN PETERSON, FORMER MEMBER OF CONGRESS FROM THE STATE OF FLORIDA

Mr. PETERSON. This has to do with what is known as the Intracoastal Waterway from Caloosahatchee River to Withlacoochee River, Fla. It was authorized in the River and Harbor Act of 1945, approved March 2, 1945, based on the report of the Corps of Engineers dated June 22, 1939. There was a period of time in between during which no omnibus bill had become law. So the report on which it is based is 6 years prior to the enactment.

Venice started to grow. The route that was first picked out had a rather extensive waterfront growth on it. There were a number of

houses built there. There are now 31 houses and 5 apartments on the first proposed route valued at nearly $2 million.

The local people objected strenuously. So in 1948 we picked out roughly what we thought might work out, which was four different routes. It was authorized in the 1948 act with the provision that it not exceed the cost to the United States of the first route. Those routes ran into about the same objections. Every time we pick out a route they build house there.

Senator HOLLAND. It is growing like a weed.

Mr. PETERSON. Yes. In 1950, in order to clear up the thing in the River and Harbor Act of 1950 we passed a provision authorizing any route.

Senator BUSH. Is that a picture of the situation?

Mr. PETERSON. Yes, sir. The first route runs along the waterfront right through here. It is some of the most valuable property in the State now. The new route dodges the town. The first route also would have cut off the town itself from the waterfront, so it had a regular "knockdown and drag out" battle, and nobody wanted it.

When this was selected it was vacant property. In 1950, in order to give the Chief of Engineers a free hand, there was a provision put into the river and harbor bill which authorized any route selected by the Chief of Engineers, the wording being this:

> That the proposed work of improvement of the Intracoastal Waterway from the Caloosahatchee River to the Anclote River (H. Doc. 371, 76th Cong.), as authorized by the River and Harbor Act of March 2, 1945, and modified by section 103 of the River and Harbor Act of 1948, is further modified to provide that in the Venice and Lemon Bay (Fla.) area the Secretary of the Army, acting through the Chief of Engineers, is authorized to select and do the proposed work of improvement on such of the previously authorized routes, or any other route as may be deemed feasible by the Chief of Engineers and approved by the Secretary of the Army.

This is the problem now. In the report on the 1950 act there is this wording:

> This section would authorize the Chief of Engineers to select any feasible route as an alternate route for the Gulf Intracoastal Waterway in the vicinity of Venice, Fla. It does not eliminate the existing proviso that the cost of the selected route shall not exceed the cost of the original route.

There, of course, the Chief of Engineers hesitates to approve the new route until we work out local contribution. It will be maybe years before they get the appropriation, so we cannot work out a local contribution now, but we do need to tie down the route. We have selected a route and it meets with the approval of the Chief of Engineers who says it is physically feasible, and is ready to approve it other than the question of local contribution.

The maps showing that route are en route here by airmail and will be in the Chief's office by Monday.

There is no dispute about the route but we run into that problem of the matter of providing for the additional cost. The additional cost of the route would be $1,300,000. But there was reserved for the original route surplus property of the old airport which has been held for part of the route and which is now estimated to be worth over $800,000.

So, while the cost of construction is greater, the right-of-way which would come back to the Federal Government is far too expensive to use for the route. So my thought would be that there are several ways it could be handled if we could write that wording out of the

report. I do not think that that inhibition applied to any of the routes except the four routes mentioned in the 1948 act, because the 1948 act says provided they shall not cost more.

I realize it would take a good deal of time to get a complete report, but we need the approval of the route. My thought is from a practical viewpoint, if we could approve the alternate route C–1, which is so designated—we have C and C–1, which are the same except as they approach these bridges they had to make a little swing so it would not be too abrupt up here. It is a difference of a few feet here and there, and it will be shown on the new map. We call them C and C–1.

If we could approve alternate route C–1, then we could provide that the limitation did not intend to apply to others than the four, and write that in the report. Or, we could do it another way by approving the route and provide that before appropriation is made for this portion of the route that satisfactory local contribution be worked out with the Chief of Engineers.

But if we don't approve the route now we are going to be running into the same thing we did on the other. The houses will be built. The subdivision is right up to this route now. We have got an agreement holding it for 6 months for us. The values will go up and it will cost us a tremendous amount of money to get it.

That is our problem.

With your permission, we will file the maps of the new routes so Senator Holland will have them, and I will file a short statement showing the history of the legislation with the citations.

Senator BUSH. Without objection, that statement will be made a part of the record.

(The statement referred to is as follows:)

INTRACOASTAL WATERWAY FROM CALOOSAHATCHEE RIVER TO WITHLACOOCHEE RIVER, FLA.

This matter is covered by letter of Secretary of War dated June 22, 1939, enclosing the report of the Chief of Engineers, etc.

House Document 371, 76th Congress, 1st session, wherein the project was approved from the Caloosahatchee to the Anclote. This was authorized by the River and Harbor Act of 1945, approved March 2, 1945 (Public Law 14, 79th Cong., ch. 19, 1st sess., S. 35) in which this item appears on page 8 as: "Intracostal Waterway from the Caloosahatchee River to the Anclote River, Fla., House Document No. 371, 76th Congress."

Shortly after this route was approved, Venice began to grow and the route originally selected became much more valuable and buildings were erected thereon and there was considerable local objection to it.

The River and Harbor Act of 1948 (Public Law 858) in section 103 provided that either of four routes described in said section could be used and used the words "*Provided*, That the cost to the United States shall not exceed the original route."

The problems as to buildings in the proposed route, cutting off certain facilities in town, etc., arose and objections to these routes were made. The River and Harbor Act of 1950 (Public Law 516, 81st Cong., 2d sess. (H. R. 5472)) in section 106 made the following provision: "Section 106. That the proposed work of improvement of the Intracostal Waterway from the Caloosahatchee River to the Anclote River (H. Doc. 371, 76th Cong.), as authorized by the River and Harbor Act of March 2, 1945, and modified by section 103 of the River and Harbor Act of 1948, is further modified to provide that in the Venice and Lemon Bay (Fla.) area the Secretary of the Army, acting through the Chief of Engineers, is authorized to select and do the proposed work of improvement on such of the previously authorized routes, or any other route as may be deemed feasible by the Chief of Engineers and approved by the Secretary of the Army."

After numerous surveys, conferences, and negotiations, "Alternate Route C–1" has been worked out, approved by the district, and approved by the district engineers as "physically feasible" but we have the problem of additional cost and the elimination of the proviso in the 1948 act.

MEMORANDUM IN REGARD TO INTRACOASTAL WATERWAY FROM THE CALOOSAHATCHEE RIVER TO THE ANCLOTE RIVER, FLA.

In the 1948 act it specifically authorized 4 routes in section 103 of the act. For convenience the entire section 103 is being set forth below:

"SEC. 103. The proposed work of improvement of the Intracoastal Waterway from the Caloosahatchee to the Anclote River, Florida, House Document Numbered 371, Seventy-sixth Congress, as authorized in the Rivers and Harbors Act of March 2, 1945, is modified to the extent herein set forth, and the Secretary of the Army, acting through the Chief of Engineers, is authorized to utilize in the area affected such of the following routes as may be determined feasible by the Chief of Engineers, with the approval of the Secretary of the Army, namely, Route 1 generally paralleling the coast from Venice Bay to Lemon Bay as heretofore authorized in the River and Harbor Act of March 2, 1945; Route 2: Run east from the junction of Little Sarasota Bay and Casey's Inlet Channel, along the south side of Venice Bay, to a point just west of the Seaboard Railroad right-of-way; thence south to Alligator Creek; thence southwest to Lemon Bay; Route 3: Run east from the junction of Little Sarasota Bay and Casey's Inlet Channel, along the north side of Venice Bay, to the old canal right-of-way; thence east along the old canal right-of-way to the divide in section 3; thence south to Alligator Creek; thence southwest to Lemon Bay; Route 4: Cut an inlet from the open Gulf to Route 1 (House Document Numbered 371, Seventy-sixth Congress) in the vicinity of south end of the airport, with the necessary protecting works and jetties, thence along present Route 1 to Lemon Bay: *Provided*, That the cost to the United States shall not exceed the cost of the original route."

It will be noted that this had the words, "*Provided*, That the cost to the United States shall not exceed the cost of the original route."

The 1950 act did not contain this limitation. However, the report on the bill did contain the following wording:

"Intracoastal Waterway from the Caloosahatchee River to Anclote River, section 106:

"This section would authorize the Chief of Engineers to select any feasible route as an alternate route for the Gulf Intracoastal Waterway in the vicinity of Venice, Fla. It does not eliminate the existing proviso that the cost of the selected route shall not exceed the cost of the original route.'

In view of this wording the Chief of Engineers has felt that any additional cost would have to be borne by local authorities. We feel that if the facts at the time of the location of the original route were as they are today, the original route would not have been selected. The original report was made at a time when property values were low. Since then more than 30 buildings have been erected within the right-of-way of the first route. We also respectfully submit that the wording in the report on the 1950 act, even though it states that it does not eliminate the existing proviso that the proviso would only apply to routes named in the 1948 act. The route finally which meets with the approval, alternate route C–1, is an entirely different route, and it is our feeling that the 1948 act could not be superimposed upon a new route. In view of the 1950 act authorizing: "The Secretary of the Army, acting through the Chief of Engineers, is authorized to select and do the proposed work of improvement on such of the previously authorized routes or any other route as may be deemed feasible by the Chief of Engineers and approved by the Secretary of the Army."

It will be noted that it authorized the selection in the work on any of the previously authorized routes "or any other route."

The 1948 proviso and the 1950 report stating that that proviso was not repealed, would only apply to the previously authorized routes and did not have the effect of making a new proviso in the 1950 act; so if a new route was selected under the provision "or any other route as may be deemed feasible," we feel that the 1948 limitation would not apply.

We respectfully urge an amendment to be placed in pending rivers and harbors bill or a special bill modifying the project so as to allow the use of alternate route C–1, and that the local authorities not be required to bear all of the cost of the increase; that the route be approved and authorized so that they can go ahead and acquire the land, even though the details of local contribution have to be worked out later if the Congress did not want to act upon the amount of local contribution at this time.

The matter might be handled in one of several ways: A provision in the report to the effect that the 1948 proviso did not apply to the new route, alternate route C–1, and the approval of alternate route C–1 might cover the situation; or an

authority authorizing the alternate route C–1 with the provision that work should not be begun on the Venice-Lemon Bay section until local participation to the amount approved by the Chief of Engineers and the Secretary of Army has been arranged.

We need the formal approval of the route, so that we can acquire the land and if we don't acquire the land the same thing will happen on this route as has happened on others, buildings will be built and the cost will become prohibitive.

Senator HOLLAND. Mr. Chairman.

Senator BUSH. Senator Holland.

Senator HOLLAND. Off the record.

(Off the record.)

Senator HOLLAND. Does anybody here from the Engineers know the story of this particular situation?

Colonel ALLEN. I know the facts with respect to the authorizing legislation, as Mr. Peterson has cited them.

One act he gave was intended, we believe, to give the Chief of Engineers authority to proceed on any route which he may deem feasible; but it was felt the intent of the committee was to limit the cost of such a project to the first route which had been selected, and that was——

Senator HOLLAND. Of course, the cost, as was estimated at that time, is completely unrealistic as compared with the cost that exists now.

Colonel ALLEN. That is correct, sir.

Senator HOLLAND. On that same route?

Colonel ALLEN. Yes, sir.

Senator HOLLAND. I request, Mr. Chairman, that the Engineers be requested to scratch their heads about this a little bit and come up with a solution which will allow us to authorize this additional route so there will be no question about the advisability of its immediate acquisition by the particular district concerned, so that they can go ahead and buy a fixed route before there is further enhancement; and in the meantime the Engineers can report back to this committee and the Congress on what is a fair way to handle the apportionment of costs under the new and developed situation.

Colonel ALLEN. Prior to requesting appropriations?

Senator HOLLAND. Yes.

Colonel ALLEN. Yes.

Senator HOLLAND. Is that your thought?

Mr. PETERSON. Yes; prior to that request, because the situation then might be a little different than it is now.

Colonel ALLEN. That is right.

Mr. PETERSON. The chances are the 3 miles of alteration of road in here—and the road is going to be moved back, anyhow, within the next 3 years.

Senator HOLLAND. Do you think there is a prospect before the construction of the canal is provided for by appropriation that relocation——

Mr. PETERSON. The relocation of the road will be involved, and one of the bridges will probably be involved; but today we can't get the thing through without putting up enough money, and we can't put up the money, and maybe we won't need to put up the money.

The Corps of Engineers have been very cooperative.

Senator HOLLAND. I went there and looked at the site last year, and my recollection is these apartment houses are brick.

Mr. PETERSON. Brick.

There are 5 brick ones and 31 houses in there.

Senator BUSH. Have the Engineers any comment to make upon this at this time?

Colonel ALLEN. I have none.

We didn't know this was coming up just until the lunch period, and that is as much as we have.

General ITSCHNER. We will be very glad to look into it, sir, and report back to the committee within the next few days.

Senator HOLLAND. Mr. Chairman, I didn't know it was coming up, but I am glad it has come up because I think it is to the interest of all concerned to get this matter adjusted so that the actual acquisition of the right-of-way for the place where this segment of the intercoastal waterways is to go can be acquired without further delay and without further enhancement of value, because that whole area is building up so rapidly and it is one of the few places on the west coast where the mainland is right on the gulf, and that makes it particularly attractive to people who want beautiful homes there. It is really a very beautiful location, and when I say unusually beautiful in Florida, that means it is really beautiful.

Senator BUSH. Thank you very much.

Mr. PETERSON. Thank you. As I said, I didn't know it was coming up until just when I got here this morning.

Senator BUSH. Senator Daniel.

Senator DANIEL. Yes, sir.

Senator BUSH. There is a project here dealing with Corpus Christi, Tex., which we understand you are interested in.

STATEMENT OF HON. PRICE DANIEL, A UNITED STATES SENATOR FROM THE STATE OF TEXAS

Senator DANIEL. Yes, Mr. Chairman.

Gentlemen, the project you now have under consideration is identified as the Port Aransas-Corpus Christi Waterway. It involves a straightening and widening to a busy portion of the existing channel for a distance of about three-quarters of a mile leading to the Bascule Bridge at the entrance of the turning basin.

Colonel, can one of you point this out as we go along?

Colonel ALLEN. Yes, sir.

Senator BUSH. Would you like the engineers to give us a brief sketch of that?

Senator DANIEL. Yes. Would you do that?

Senator BUSH. That is what has been very helpful to the committee, and I am sure you will find it very helpful, Senator.

Colonel ALLEN. This project is only a part of the Port Aransas-Corpus Christi Waterway project. It is at the upper end of navigation, some 30 miles from this point to the Gulf of Mexico.

The existing project provides for depths of 36 feet, as shown in the area outlined in black, through this bridge into the basin.

As commerce has developed in this area, the limitations of this bridge have become increasingly more bothersome to navigation.

The clearances in here are 90 feet from fender to fender, with a 10-foot vertical clearance.

This bridge was built in 1926 and since that time, of course, commerce has greatly increased and the size of shipping, the type of vessel, has greatly increased in size, length, and breadth.

The Corps of Engineers and local interests are now engaged in negotiations to relocate this bridge, to alter it or relocate it, to an area beyond the present location. That will be done under the provisions of the Truman-Hobbs Act, and that is not incorporated as a part of this project.

Local interests, after this bridge is removed and the tracks and highways relocated which now cross it, propose to construct a high-level highway bridge which will not be an impediment to navigation.

The project essentially recommended here is a modification to include a wide channel, 400 feet wide and 36 feet deep, in a straight shot into the interior basin.

That requires local interests to remove the portion of the breakwater which would encroach on the channel; requires local interests to acquire lands, rights-of-way and do what has to be done in order to make this point of land available and relocate the facilities which are now there.

The total cost to the Federal Government of this project is $180,000 for the dredging, and that is the total cost to the United States.

The cost to local interests for relocations and rights-of-way is $506,000.

The benefit-cost ratio of the project is 2.2.

There are no objections to the project by any agency to which this report has been submitted, including the Bureau of the Budget.

I might say that the commerce into and out of the Corpus Christi area—that is, this particular basin—in 1953 was 12 million-plus tons, under the project as it now exists.

Senator HOLLAND. Mostly oil tankers?

Colonel ALLEN. Primarily oil; yes, sir. Ninety-four percent of the commerce is in petroleum.

Senator BUSH. What are you going to do at this point?

Are you going to cut off that breakwater there?

Colonel ALLEN. This breakwater will be removed.

Senator BUSH. And at that point of land off there?

Colonel ALLEN. Yes, sir. Local interests are going to remove this breakwater. Local interests are going to deed to the United States or acquire this property for removal, and the channel will be, as shown in green, across the area now occupied by the breakwater, and through here, the bridge being removed under another arrangement.

Senator BUSH. What are they going to use for a bridge?

Senator DANIEL. The State has agreed to relocate the bridge or to make a replacement.

Senator BUSH. There won't be any bridge at that point, you mean?

Mr. MILLER. Yes, sir.

Senator BUSH. There will be a bridge there?

Mr. MILLER. Yes, sir.

Senator HOLLAND. And a high-level bridge under which the ships can pass.

Colonel ALLEN. And the railway bridge is going to be located up in this vicinity, under the provisions of the Truman-Hobbs Act.

Senator HOLLAND. Colonel, when you said the breakwater would be removed, you meant just the tip of the breakwater that would interfere with the channel?

Colonel ALLEN. That is correct.

Senator HOLLAND. And maybe some portion——

Colonel ALLEN. Just the portion that would interfere with it, enough to include the bottom and side slopes.

Senator BUSH. Now, Senator, would you give us what you have to say on this?

Senator DANIEL. Yes, Mr. Chairman.

I think the Colonel has covered about everything I wanted to say or emphasize.

The work contemplated in this particular project report is relatively a small part of a comprehensive plan for modernizing the rapidly growing port of Corpus Christi; but this part of the project, comparatively small though it is from the standpoint of cost, is the essential key which must first be provided before the larger aspects of the problem can be effectively considered at a later date.

The total Federal cost of this particular project is only $180,000, whereas the cost to local interests will amount to $506,000. I am sure you will agree that this is a remarkably high proportion of expense to be borne by local interests on a navigation project, but the local interests are vitally aware of the need for prompt authorization of this work, and are ready and willing to assume this expenditure, as well as to discharge other responsibilities usually required. Furthermore, this project bears an unusually high ratio of benefits-to-cost, in excess of 2 to 1.

I am further advised that all agencies of Government have approved the project, and it was formally transmitted to Congress from the Secretary of the Army yesterday.

The existing bascule bridge at the entrance to the turning basin is old and obsolescent, and has been declared by the Secretary of the Army to be a hazard to navigation, and its removal, and replacement by a modern structure, is required.

The State of Texas is ready to erect at that location a high-level fixed bridge providing six lanes for vehicular traffic, while a new lift bridge to accommodate both rail and highway traffic will be constructed 4 miles further inland on the extension of the channel westward.

Although this bridge construction is not involved in the project now under consideration by this committee, the future program is strongly affected by the action to be taken on this particular phase of the work, for the alinement of the proposed new bridge and its approaches must conform to the alinement of the navigation channel Accordingly, it is essential that this channel realinement project be incorporated in the present authorization bill, in order that the State highway department of Texas, as well as the county and city governments and navigation district, may coordinate their planning and make it conform to the approved comprehensive plan of improvement.

I want to emphasize the importance of getting this in this particular bill. The State highway department and the railroad interests want to make their plans for the new bridges, and they are ready to go ahead with their plans if we can get this authorized in the bill now passed by this Congress.

Corpus Christi is one of the most rapidly growing cities in the United States, having virtually doubled its population every 10 years during the past 4 decades, and it is a city whose progress and prosperity is very heavily dependent on water transportation.

Local interests are moving forward decisively to meet the urgent demands of the improvement of their port facilities, and it is incumbent upon the Federal Government to discharge its own responsibilities.

I urge the committee to include this important channel realinement project in the current omnibus authorization bill.

Senator Johnson wanted to come in and appear before the committee if he had an opportunity, but I see that he is not here and, therefore, I ask permission to file with the committee this statement from Senator Lyndon Johnson.

Senator KUCHEL (presiding). Without objection, it will be received and made a part of the record.

Senator DANIEL. Thank you.

(The statement of Senator Johnson of Texas is as follows:)

STATEMENT OF SENATOR LYNDON B. JOHNSON

Mr. Chairman and gentlemen of the subcommittee, I appear before you today to urge that the Port Aransas-Corpus Christi Waterway of Texas be modified by realining and widening the channel to 400 feet for a distance of about 4,000 feet at the entrance to the Corpus Christi turning basin in accordance with the recommendations of the Chief of Engineers. The channel realinement recommended by the Corps of Engineers requires a Federal expenditure of only $180,000 as compared to an expenditure of $506,000 by local interests. The project is not only urgently needed from the standpoint of safety and future growth of the port but is amply justified by the benefit-to-cost ratio of better than 2 to 1. The project report has been approved by all Government agencies concerned.

The proposed realinement of the short section of the Port Aransas-Corpus Christi Channel is of such paramount importance to the continued use and growth of the waterway, to national defense, and to the comprehensive plan for development of the port of Corpus Christi that any delay in authorizing this project may affect the port for many years to come. The requested modification, which will remove two sharp bends in the channel and obstructions that now limit sight distances, together with the removal of the present bridge, will eliminate the extremely hazardous conditions that now exist for large vessels and long barge tows. The channel realinement is only a small part of the overall plan of local interests for expanding the port of Corpus Christi and making it available to the largest vessels afloat.

The port of Corpus Christi cannot expand further until the channel is realined and widened and the present bascule bridge removed so that the largest vessels operating in the gulf may enter the port. The larger vessels cannot now enter the port to load oil and refined products because of the limited horizontal width between fenders of the present bascule bridge and minimum depth of water through it due to shallow piers.

The comprehensive plan prepared by the area development committee of Corpus Christi for eliminating the bascule bridge bottleneck and expanding the port of Corpus Christi was adopted by the city, county, and navigation district and supported by all local groups and marine interests at the public hearing before the Corps of Engineers on December 10, 1952. The plan adopted contemplates ultimately removing the existing bridge, replacing it with a high-level fixed bridge located near the present bridge with 6 lanes for vehicular traffic, constructing a combination vertical-lift rail and highway bridge about 4 miles up the channel from the present bridge, and relocating the railroad tracks to connect with the upper bridge.

Local funds are already available for constructing the high-level highway bridge and engineering planning preparatory to beginning construction of the project is progressing rapdily. It is contemplated that the upper crossing, which will be a combination rail and highway vertical-lift bridge, will be constructed under terms of the Truman-Hobbs Act. After receiving the information submitted at the

public hearing on December 10, 1952, the Secretary of the Army certified that the present bridge is an obstruction and hazard to navigation and must be removed. Negotiations are progressing rapidly with the Corps of Engineers to determine the ratio of Federal and local participation in the cost of removing the present bridge and constructing another bridge at the upper channel crossing.

To keep all phases of the plan coordinated toward the ultimate goal of an unobstructed entrance to the port of Corpus Christi, it is essential that the channel realinement project be authorized at this session of Congress. Authorization of the project now will make it eligible for funds at such time as the work can best be coordinated with the ultimate plan for removal of the bascule bridge.

The section of the channel which requires straightening and widening is a very busy and vital segment of the Port Aransas-Corpus Christi Waterway, since it lies between the open sea and the many oil refineries, oil tank farms, and public docks located at Corpus Christi. Records show that in 1953 a total of 16,318 deep-sea ships, barges, and other vessels passed through the bridge which is located at the westerly end of the proposed channel realinement. However, many other vessels used the channel, but either did not pass through the bridge or went through while it was raised for other vessels. Consequently, the bridge records do not show all the traffic that used the channel. However, the vessels that passed through the bridge carried 12,135,931 tons of cargo which had an estimated value of $342,935,000.

The entire industrial area of Corpus Christi, which depends on water transportation is also dependent on and is affected by the presently inadequate channel. Any serious mishap to the bridge or accident in the entrance channel will close many of the industries in the Corpus Christi area within a matter of days.

The vital importance of this particular section of the channel cannot be stressed too strongly; and I urge that the requested modification of the Port Aransas-Corpus Christi Waterway be approved and incorporated in the authorization bill.

Senator HOLLAND. I have one question: Colonel, has the Rivers and Harbors Board approved this modification?

Colonel ALLEN. Yes; this has been approved by the Rivers and Harbors Board for transmission to the Congress.

Senator DANIEL. Mr. Dale Miller would like the committee to hear him for a minute. He is representing the port of Corpus Christi.

Senator KUCHEL. All right. We will be glad to hear from you, Mr. Miller.

STATEMENT OF DALE O. MILLER, REPRESENTING THE PORT OF CORPUS CHRISTI, TEX.

Mr. MILLER. I am Dale O. Miller. I represent the port of Corpus Christi, Tex.

This project, I think, has been thoroughly explained by Colonel Allen. It is a simple and straightforward navigation project. It is rather uncomplicated, I don't need to say very much more about it.

As was explained, local interests will remove this section of the breakwater, and this point of land here.

This old bridge is completely obsolescent and must be replaced; and, under the terms of the Truman-Hobbs Act, that bridge has been found by the Secretary of the Army to be a hazard to navigation.

The State highway department has already agreed and has developed plans for a high-level bridge for six lanes of traffic at or near the present site of this bridge.

The railroad portion of the bridge will be moved back a distance of about 4 miles, westward on the inland channel extension. The railroad tracks will be rerouted to go over that bridge, back to the station.

The important thing about this particular project now is that it is essential that it be incorporated in this bill because the State highway department and the city and county governments in the navigation district must go, of course, about the proposed channel realinement in order that their own plans for the construction of those bridges and approaches may be alined so as to conform with the approved master plan.

As has been explained, the total cost to the Federal Government is $180,000; the total cost to the local interests is $506,000, and the benefit-cost ratio is 2.2 to 1.

We do urge this committee give it favorable consideration.

Senator KUCHEL. Thank you very much.

Senator HOLLAND. I would like to ask one question: Does the Intercoastal Waterway pass through that basin and under that bridge?

Mr. MILLER. Yes; it does.

I am executive vice president of the Louisiana and Texas Intercoastal Canal Association, and the Intercoastal Waterway, of course, coincides with this Corpus Christi channel at that point.

Senator HOLLAND. Off the record.

(Off the record.)

Senator DANIEL. Thank you, committee.

Senator KUCHEL. Thank you, Senator.

Without objection, this memorandum concerning the Port Aransas-Corpus Christi Waterway will be made a part of the record at this point.

(The memorandum referred to is as follows:)

PORT ARANSAS-CORPUS CHRISTI WATERWAY (INTERIM)

(Report of Chief of Engineers, May 24, 1954)

Location: In southern portion of coast of Texas, 180 miles southwest of Galveston and 132 miles north of the mouth of the Rio Grande.

Report authorized by: House Public Works Committee resolution adopted September 27, 1951.

Existing project: Provides jettied entrance from Gulf of Mexico; channels for deepwater navigation 38 and 36 feet deep. Affords deepwater navigation to Harbor Island and Corpus Christi with turning basins at Corpus Christi, Avery Point, and an inner basin at Harbor Island.

Plan of recommended improvement: Modification of existing project to provide for an entrance channel 38 feet deep and 400 feet wide on a tangent alinement from the 400-foot channel in Corpus Christi Bay near the Corpus Christi breakwater, to the flared approach channel to the Corpus Christi turning basin.

Estimated cost:

Report (December 1953):	
Federal	$180,000
Non-Federal	506,000
Total	686,000

Local cooperation: Furnish lands, easements, rights-of-way, spoil disposal areas; accomplish relocation and alteration of pipeline and cable crossings on rights-of-way and removal of buildings, structures, and a portion of rubble-mound breakwater; hold and save the United States from damage.

Project economics:

	Current
Annual charges:	
Interest and amortization	$26,700
Maintenance	5,300
Total	32,000
Annual benefits:	
Savings on transportation	37,400
Reduction in hazards to navigation	35,000
Total	72,400
Benefit-cost ratio	2.2

Comments of the Bureau of the Budget: No objection to submission of the report to Congress.

Remarks: Reason for preparation of interim report is that local interests requested consideration of modifying entrance channel to Corpus Christi turning basin at this time so that local authority may design proposed vehicular tunnel under entrance channel.

Senator KUCHEL. The next project is the Pecos River project in New Mexico.

Senator Chavez.

Senator CHAVEZ. Did Texas leave anything for us?

Senator KUCHEL. Not very much, Senator.

Senator CHAVEZ. I was sure of that.

Senator KUCHEL. General, do you have——

General ITSCHNER. Colonel Starbird will testify.

Senator KUCHEL. Colonel Starbird.

Senator CHAVEZ. Colonel Starbird, but I have a very short statement.

Senator KUCHEL. Would you like to make it first, Senator?

Senator CHAVEZ. If I may. I think it will help the colonel to proceed with his own testimony.

Senator KUCHEL. All right. Proceed.

STATEMENT OF HON. DENNIS CHAVEZ, A UNITED STATES SENATOR FROM THE STATE OF NEW MEXICO

Senator CHAVEZ. There is before the committee, Mr. Chairman, Senate bill 3252, introduced by me on April 5 of this year. It is to authorize the project for flood control on the Pecos River and tributaries in New Mexico in accordance with the report of the Board of Army Engineers for Rivers and Harbors. It will cost a certain amount of money.

I have asked the Army engineers to proceed here today with the proposed report of the Chief of Army Engineers so that we can begin action on this project.

There are no accompanying comments from the Bureau of the Budget, the Interior Department, or the Agriculture Department, which should and have been asked to comment on the matter.

On April 23 the Chief of Engineers asked comments on the proposed report from the State of New Mexico, the Interior Department, and the Agriculture Department, as well as the Commerce Department and the Public Health Service.

You see, under the law, after they make a report, they submit that report to the interested agencies, including the local agencies, which in this instance was the State.

Senator KUCHEL. I see.

Senator CHAVEZ. The Commerce Department and the Public Health Service have entered their reports.

I, personally, urged the State to make comment as rapidly as possible in late April.

Now, by law, the States and the interested Federal agencies are allowed 90 days in which to file comment on the proposed report of the Chief of Engineers. That time limit expires today, this date, when we are having the hearing, and still there are no reports.

We have waited the fixed period, a time limit which is known well to all. Our legal obligation is ended and we are no longer obliged to wait upon late reports in order to consider this project, or any other project, under like conditions.

I respectfully suggest that we proceed to listen to the testimony of the Army engineers and proceed to a consideration of the project at the proper time next week, or whenever the chairman will call an executive session of the subcommittee.

The main point there, Mr. Chairman, in this instance, is this: It is all right to ask this department of government and the other department of government, but those folks living and who will be benefited by a particular project anywhere, whether it be California, whether it be Florida, whether it be here, are entitled to be considered, in my opinion, before the committee.

Now, we only ask that you listen briefly to the Army engineers on the project.

Senator KUCHEL. Thank you very much, Senator.

Colonel Starbird.

Colonel STARBIRD. This project was added to the agenda this morning and, therefore, with your permission, I may call on some of the staff to answer some of the more detailed questions.

Items contained in the 1938, 1939, and 1950 Flood Control Acts directed that we investigate this basin.

The Pecos Basin is a very large basin. The river, itself, is about 525 miles long.

There are about 44,000 square miles within the basin.

The terrain varies from being rugged and quite mountainous in the upper part to a more gradual area in the south. Gradually it flattens out to being a river of reasonable slope, such as is normally found on the average throughout the United States.

The major area of damage along the river is an area extending roughly from Alamogordo Dam, an existing dam, to an area below the city of Pecos, near the town of Girvin, Tex.

Senator CHAVEZ. May I interrupt just a moment?

Colonel STARBIRD. Surely.

Senator CHAVEZ. In order to orient both the chairman and Senator Holland, Alamogordo Dam is part of the Carlsbad irrigation project.

The one he is talking about over here is from the Texas side. The Pecos River crosses New Mexico, and the project there is on the Texas side.

This happens to be up there close to the upper waters of the Pecos River in New Mexico.

Colonel STARBIRD. We have on the average a major flood in the area about once every 8 years.

We have just finished having a major flood in the lower area. In fact the flow out of the Pecos contributed to a major extent to the

flood on the Rio Grande, which was quite a tragic flood during this last month.

The average annual damage in this region of the river is estimated to be about $1,350,000.

The Alamogordo Reservoir is a reservoir now having a capacity of roughly 128,000 acre-feet. There has been continual siltation in the reservoir. It originally had, I believe, a capacity of in the neighborhood of 200,000 acre-feet.

The spillway of the Alamogordo Reservoir is considered not to be safe considering the floods that might come down upon the dam itself from the region upstream.

Senator HOLLAND. Is it a flood-control structure?

Colonel STARBIRD. It is an irrigation structure.

Senator HOLLAND. Irrigation.

Colonel STARBIRD. Irrigation structure, sir.

Senator CHAVEZ. But in designing the dam and in planning the dam they put in what was purported to be a little flood-control business, which did not work out.

Colonel STARBIRD. The recommended plan is a plan for construction of one reservoir and the local improvement, channel improvement, basically, and small levees in two of the communities downstream.

I might mention the district engineer recommended local protection in the third of the communities, Carlsbad, but the elements of local cooperation do not appear to be forthcoming according to the Board's recommendation. The Chief of Engineers' report recommends, therefore, local improvement works at only two locations.

The Los Esteros Dam would be constructed to have a capacity of 587,000 acre-feet. Of those 587,000 acre-feet, approximately 250,000 would be allocated to irrigation, the irrigation storage that was available in Alamogordo being shifted to Los Esteros. The remaining capacity would be for silt and for flood control.

Here at Alamogordo there would be modification of the spillway and raising of the dam and Alamogordo would become a flood-control dam instead of an irrigation dam.

The total estimated cost of the reservoir portion of the project would be $7 million, and the benefit-to-cost ratio including the 2 elements of improvement, would be 1.53 to 1.

In the city of Artesia there would be channel diversion, channel improvement, and levees. The estimated cost of the work there would be about $500,000 to the Federal Government. Local interests would be expected to pay for lands and rights-of-way and relocations. The estimated cost to them would be $136,000, and the benefit-to-cost ratio of the project would be 2.98 to 1.

In the city of Pecos, the improvement would be of a similar nature. The estimated cost to the Federal Governmentwould be $2 million; to local interests, $315,000, and the benefit-to-cost ratio would be 2.34 to 1.

As already brought out, the report has been forwarded to outside agencies for comment. Public Health and Commerce have replied giving their concurrence. The States of Texas and New Mexico, the Department of Interior and the Department of Agriculture have not as yet replied.

The report has not been forwarded to the Bureau of the Budget.

Senator HOLLAND. Do you anticipate the receipt of the reports from the Governor and from these bureaus within the next day or two? Have you checked on it?

Colonel STARBIRD. We have not checked on them, sir. We normally wait the full 90 days, of course, and we often wait a longer period of time.

Senator CHAVEZ. In order to orient the two Senators here with the Pecos River, starting at Pecos, about every 5 or 6 miles there is some little country town. The river starts at Pecos proper, and down the river there are little community towns that have existed for 200 to 250 years, all along, until you reach Alamogordo Dam.

Alamogordo Dam is the dam that holds the water to irrigate the Carlsbad irrigation project, way down below. They built that, the second dam, about 7 or 8 years ago, and it is heavily populated—not compared to the Eastern States or the heavily populated States, but, nevertheless, people are there, dependent upon these waters for existence and survival.

If we can adequately take care of the water, take care of flood hazards and give them a little irrigation, they will stay there instead of going to Albuquerque and going on the relief rolls.

Am I not right, Colonel Starbird, more or less?

Colonel STARBIRD. Yes, sir; I believe your description is correct.

Senator HOLLAND. Off the record a minute.

(Off the record.)

Senator KUCHEL. All right, Senator.

Senator CHAVEZ. Thank you.

PECOS RIVER AND TRIBUTARIES, TEXAS AND NEW MEXICO

(Report of Board of Engineers for Rivers and Harbors, March 26, 1954)

Location: Pecos River rises in central New Mexico and flows southeasterly for 525 miles in eastern New Mexico and 401 miles in western Texas to enter the Rio Grande on the Mexican Border.

Report authorized by: Flood Control Acts of 1938, 1939, and 1950.

Existing project: None.

Plan of recommended improvement: Improvement of Pecos River, Tex., and N. Mex., by construction of Los Esteros Reservoir, modification of Alamogordo Dam and Reservoir, and integrated operation of the two reservoirs by the Chief of Engineers; construction of local flood-protection works at and in the vicinities of Pecos, Tex., and Artesia, N. Mex.

Estimated cost (June 1953 price levels):

	Federal	Non-Federal	Total
Los Esteros and Alamogordo Reservoirs project	$7,000,000		$7,000,000
Flood protection, Pecos, Tex.	2,000,000	$400,000	2,400,000
Flood protection, Artesia, N. Mex.	540,000	160,000	700,000

Local cooperation: For Los Esteros and Alamogordo Reservoirs project: Consent of Carlsbad Irrigation District to the transfer of irrigation storage capacity from Alamogordo Reservoir to Los Esteros Reservoir, and to exclusive use of Alamogordo Reservoir for flood-control purposes unless detailed studies indicate that a limited storage allocation to irrigation may be feasible and would not adversely affect its operation for flood control; continue to fulfill its repayment obligations to the United States; participate in maintenance and operation costs in an amount equal to what it is now obligated to pay toward maintenance of Alamogordo Reservoir, estimated at $10,000 annually. For local protection works at Pecos and Artesia: Furnish all lands, easements, and rights-of-way, including alterations to existing improvements, other than railroads; hold and save the United States

free from damage, including damage which may result from temporary ponding of interior drainage and effects on sewage systems; maintain and operate all works after completion.

Project economics:

	Current
Annual charges:	
Los Esteros and Alamogordo	$288,000
Pecos, Tex	91,000
Artesia, N. Mex	28,000
Annual benefits:	
Los Esteros and Alamogordo	397,000
Pecos, Tex	189,000
Artesia, N. Mex	79,000
Benefit-cost ratio:	
Los Esteros and Alamogordo	1.38
Pecos, Tex	2.08
Artesia, N. Mex	2.82

Comments of the Bureau of the Budget: Not yet submitted to budget, as of July 26, 1954.

Remarks: Report was sent to State and Federal agencies for comment on April 23, 1954. As of July 26, 1954, comments have not been received from the States, Departments of Interior and Agriculture, or Federal Power Commission.

Senator HOLLAND. Are there any other projects?

Senator KUCHEL. Just a couple.

Mr. Gutermuth is appearing in lieu of Mr. Callison, representing the Wildlife Management Institute.

Mr. GUTERMUTH. This is a very simple statement and will only take a few minutes.

Senator KUCHEL. All right. Will you proceed?

Mr. GUTERMUTH. Yes, sir.

Senator KUCHEL. I might say, in the interest of time, the entire statement will be made a part of the record, if you could just indicate here orally to Senator Holland and me——

Mr. GUTERMUTH. Well, it is very short, Senator Kuchel.

Senator KUCHEL. All right.

STATEMENT OF C. R. GUTERMUTH, VICE PRESIDENT OF THE WILDLIFE MANAGEMENT INSTITUTE

Mr. GUTERMUTH. I would like to say, Mr. Chairman, I am speaking in behalf of Mr. Carl D. Shoemaker, the general counsel of the International Association of Game, Fish, and Conservation Commissioners; Mr. William Voigt, Jr., the executive secretary of the Izaak Walton League of America; Mr. Charles H. Callison, the conservation director of the National Wildlife Federation; and Mr. Michael Hudoba, the conservation director of the Outdoor Writers Association of America.

We appreciate the courtesy of being permitted to appear in support of the proposed amendment to H. R. 9859.

I am the vice president of the Wildlife Management Institute of Washington, D. C.

Mr. Chairman, the proposed amendment to the River and Harbor Act of 1954 can be explained in a few minutes. We will not consume more than 10 minutes of the valuable time of this committee. In fact, I do not think it will take that long.

Most of you are already aware of the important problem that concerns the national conservation organizations, and which could be remedied by this simple amendment to the basic provisions of this authorization bill.

Perhaps it should be emphasized in the beginning that we have no desire to discuss any of the individual projects covered by this bill.

The proposed amendment to title I, section 101, of H. R. 9859, would do only one thing: It would make the survey and reporting requirements of Public Law 732 of 1946, the Coordination Act, apply to all rivers and harbors and flood-control projects, including those that were authorized prior to 1946, but upon which no construction has been started.

The Coordination Act, I hasten to add, merely requires that the Office of River Basin Studies of the United States Fish and Wildlife Service survey the effects that the proposed water-development project would have on the existing fish, wildlife, and recreational features in the area involved, and submit a report to the Corps of Engineers or the Bureau of Reclamation. The survey report then is appended to the prospectus that the construction agency submits to Congress.

The Coordination Act—we feel, is a modest law, but from the standpoint of some 33 million Americans who hunt and fish, and the many other millions who use the out-of-doors for wholesome recreation, it is a law of great basic importance. While there is nothing compulsory in the 1946 act, other than the requirement that survey reports be submitted to Congress, it does give the people a sense of security and a feeling of satisfaction that they will get maximum benefits from all project planning.

The conservation organizations believe that the Congress should have those additional survey reports so that full consideration can be given to all resource values in all river and harbor flood-control projects. In fact, Congress itself recognized the benefit and need of having those separate analytical reports when it established the Office of River Basin Studies in 1946, with the enactment of Public Law 732.

The Members of Congress obviously felt that those fish and wildlife studies would develop information that would be useful in determining both the benefits and damaging effects of all such projects.

River basin studies, Mr. Chairman, have been made on all projects that have been authorized since 1946. You and your colleagues have had the benefit of those appraisals at the time that Congress has considered all new projects that have been submitted since the enactment of the Coordination Act. The only exceptions have been for projects, and modifications of projects, that were authorized prior to 1946, such as those in the lower Mississippi Valley that date back to the blanket authorization of 1928.

The Corps of Engineers is going ahead each year with projects, or modifications of projects, that were authorized as far back as 1920. In those instances, the Members of Congress are being deprived of the opportunity to appraise the impact of such works on present-day conditions, and we feel that they should be given an opportunity to see exactly what is being done. The Office of River Basin Studies is equipped to conduct the desired surveys and no new appropriations are being requested.

In reiteration, we wish to stress the fact that this amendment applies only to those projects that were authorized prior to 1946, and upon which no construction has been started.

Perhaps it also should be stated that we are concerned primarily with the lower Mississippi Valley. That area is exceedingly impor-

tant from a conservation standpoint, since it embraces vital wintering grounds of ducks and geese and other migratory birds. The records show that it is a region of tremendous value in meeting the fishing, hunting, and recreational needs of millions of people, and it must serve an ever-expanding human population.

The national-conservation organizations and local sportsmen's clubs contend that every effort should be made to minimize the losses in the remaining resources, and to mitigate the adverse effects of all of the developments that are deemed necessary.

The Department of the Interior maintains that Public Law 732 applies to all projects regardless of the date of authorization. The Corps of Engineers is prone to proceed without requesting river basin surveys on projects approved under those old authorizations. This amendment is needed for clarification. The corps must be reviewing those earlier proposals, and when they are doing that, we feel that the companion studies should be made.

We will be pleased to attempt to answer any questions of the committee, and I want to thank you for this courtesy.

Senator KUCHEL. Thank you.

Senator Holland, do you have any questions?

Senator HOLLAND. Of course, I am strongly in favor of this kind of thing. We did it in the case of our central and south Florida situation and it proved very helpful, and I believe the Fish and Wildlife Service has taken over one of the large storage areas for operation as a bird and game and fish refuge.

What was the reason this was applied only in the case of those projects authorized in the 1946 act and thereafter?

Mr. GUTERMUTH. I believe that it was merely a normal error in the wording of the 1946 law. The law was intended to be put into effect as of that date, and nothing was said about the past, so to speak, and we have gone ahead all of these years. But now the people are beginning to discover that some of the older projects are being picked up under those blanket authorizations and that the river basin studies are not being submitted for the consideration of Congress. They feel that this should be done.

Senator HOLLAND. I suppose there is a large backlog of projects authorized prior to 1946 which would be covered by this amendment, is there not?

Mr. GUTERMUTH. Well, that is probably so; but I would venture to say, Senator Holland, that only a small number would ever be considered. Many of those projects are never going to see the light of day. I mean they were planned and conceived way back as far as 1920. Many of those projects will not come up.

I believe that the general here could answer that better than I, but the point is, we are concerned with that small number of projects each year. In other words, the corps makes its plans for what it is going to do next year, and some of those projects may be ones that were authorized earlier; and, as I said, when the corps is proceeding with its plans for next year, it would seem to us that the river basin surveys could be ordered at that time, and when the corps gets through with its revised plans, those other surveys would be ready to submit to Congress for consideration.

Senator HOLLAND. You indicate your principal interest is in the lower Mississippi Basin.

Mr. GUTERMUTH. That is where we have been receiving tremendous public criticism—or maybe I shouldn't say criticism, but complaint of the fact that the surveys are not being made.

I attended a meeting in Vicksburg a short time ago and spent a whole day discussing this subject with General Hardin and the other members of his staff, along with local organizations representing practically every walk of life. There were professional organizations represented there, conservation clubs, sportsmen's groups, and even a church organization. They discussed this subject all day long.

I don't think I am speaking out of turn when I say that General Harden admitted that they have found benefits in these survey reports, things that they have incorporated into their projects as a result of the river basin surveys. He brought out the fact that the survey reports have been useful to him. However, he did say that the corps, as is expected, must be governed by the law, and he contended that the law does not apply to those earlier projects and, consequently, the surveys are not ordered.

Senator HOLLAND. You indicated the present setup would permit the rendition of this service without additional appropriation. Are you sure that is the case?

Mr. GUTERMUTH. Well, I couldn't be sure that some day the Service is not going to come in and ask for more money to do this or that kind of work. All of the governmental agencies, Senator, do that; but the fact is they have a fully equipped staff. They are ready to conduct the surveys. I am quite sure that many of the projects that we are considering could be included in their present work program.

Senator HOLLAND. I was going to congratulate you upon having found a Government agency that could greatly expand its effort without additional money. I didn't know of any such.

Mr. GUTERMUTH. Well, they do have a good and efficient staff and quite a program. How much the Office of River Basin Studies can carry on without additional appropriations, I don't know.

I did want to emphasize that at this time we are merely asking for this simple amendment, which would do nothing more than authorize the conducting of those surveys. Congress would have to be the judge of the extent of the construction work that would ultimately be authorized.

Senator HOLLAND. Your thought is and the practice is that where Fish and Wildlife Service in its survey comes up with recommendations that changes in detail would be very much more helpful to conservation, fish and game and the like, that there is a chance given to adjust the program before it is begun so as to include that?

Mr. GUTERMUTH. That is right.

Senator HOLLAND. Is there any requirement that that be done?

Mr. GUTERMUTH. No; none whatsoever. The reports are merely attached as an appendix to the construction prospectus for the program. The reports are made solely for the consideration of Congress or for the use of Congress in the consideration of the proposal. There are no other mandatory or compulsory requirements.

Senator HOLLAND. Has the making of the reports in cases up to this time resulted in alterations of the program so as to meet the points or some of the points brought forward by the reports?

Mr. GUTERMUTH. Yes, and that is the point I tried to make earlier when I mentioned the meeting with General Hardin and his staff.

He made the voluntary statement that the corps had, as a result of information that was revealed in those reports, made slight modifications in its plans which resulted in benefits to the people, and I think that ample testimony of many such benefits could be cited from elsewhere.

I believe, Mr. Callison, you have a number of citations of particular cases of benefits that have been derived from these reports.

Senator KUCHEL. By reason of the changes that have been made?

Mr. GUTERMUTH. That is right, that the construction agency has made at the time of its planning.

Senator HOLLAND. Do you know of any opposition by the Engineers or the Mississippi River Authority or any other constructing groups and operating groups to the passage of this amendment?

Mr. GUTERMUTH. I know of none; no, sir.

I know this: That the subject has been under consideration between the Department of the Interior and the Department of the Army over a period of time; but what the results of their meetings have been, I do not know.

Senator HOLLAND. Off the record a minute.

(Off the record.)

Senator KUCHEL. Thank you very much, sir.

Have you given to Senator Holland your proposed amendment?

Mr. GUTERMUTH. Yes.

I didn't read it, since copies were given to you. It is very short.

There is a copy, Senator.

Senator KUCHEL. It will be made a part of the record, and a report will be made to the full committee.

(The amendment referred to is as follows:)

PROPOSED AMENDMENT TO H. R. 9859 (RIVER AND HARBOR ACT OF 1954)

Amend title I, section 101, page 2, line 10, by adding a semicolon instead of a colon after the word "full," and by adding the following:

"*And provided further*, That the provisions of the Act of August 14, 1946 (16 U. S. C. 661–666c), where applicable, shall apply to all rivers and harbors and flood-control projects authorized in this Act; and to all such projects or segments thereof heretofore authorized, the construction of which has not been started."

Mr. TUCKER. Mr. Chairman, may I be heard?

Senator KUCHEL. Yes, sir.

STATEMENT OF BRUCE TUCKER, EXECUTIVE VICE PRESIDENT OF THE MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION, MEMPHIS, TENN.

Mr. TUCKER. My name is Bruce Tucker. I am executive vice president of the Mississippi Valley Flood Control Association at Memphis, Tenn.

The association is composed of the State agencies furnishing the local contribution to the flood-control program on the lower Mississippi River in the form of the levee and drainage district.

There are 44 of them from Cape Girardau south.

This proposal is something that we had not heard of until this moment.

The entire question is one of great controversy at the present time. I think Mr. Gutermuth and I could agree on that.

I think very definitely before any changes were made in Public Law 732 that our people would want to be heard.

I am in no position to discuss it, but I do think certainly a proposition which would encompass the making of a present law retroactive over a very large number of projects that the levee boards in the lower valley would want to be heard on it before it might become law.

Senator KUCHEL. All right, sir. Thank you very much.

Are there any questions?

Senator HOLLAND. Do you think that result would follow even if there was to be nothing mandatory in the nature of the reports, but it was to be for information alone?

Mr. TUCKER. Well, of course, Senator, there is nothing mandatory in the present reports under 732, and there are a great many controversies in various sections, in Louisiana, in Arkansas, in connection with the project you heard this morning in west Tennessee, even under the present law.

Senator HOLLAND. Thank you, sir. Mr. Chairman, may I be excused?

Senator KUCHEL. Yes, Senator. The last project is that of the lower Heart River, Mandan, N. Dak.

The acting chairman of the subcommittee will first incorporate in the record a statement by the junior Senator from North Dakota, the Honorable Milton R. Young.

(The statement referred to is as follows:)

STATEMENT OF SENATOR MILTON R. YOUNG, IN BEHALF OF THE LOWER HEART RIVER PROJECT, MANDAN, N. DAK.

Mr. Chairman, first, I want to express my deep appreciation for your kindness and cooperation in hearing this proposed project for flood-control works on the lower Heart River near Mandan, in my State.

Although all of the usual procedural requirements in connection with these matters may not yet have been fully met, I feel that because this is a modification of an existing project that compliance therewith before the hearing is not of any great importance. The Governor of North Dakota has expressed his views and strongly endorsed the proposed improvements on behalf of the State.

I am also informed that the Department of Commerce has also indicated its approval. The only comments not received at this time are those of the Department of the Interior, and I understand that these will be forthcoming very soon. I have no reason to believe that there will be any objections by that Department.

I now wish to add my own approval and support of the proposed improvements. I personally know of the damage and havoc from recurring floods in the affected area. Although the city of Mandan suffers great financial losses when these floods strike, I want to emphasize that rural areas also suffer in the same proportion. The sand, gravel, rocks, trees, and other debris left on the rich and fertile bottom lands by high waters and ice cause inestimable damage to the crop lands. I feel it is extremely important to complete these improvements by straightening, deepening, and widening the channel and continuing the levees all the way to the confluence with the Missouri River.

It may also be necessary to raise existing levees in some places and replace or raise highway and railway bridges. I sincerely urge that this project be approved and included in the pending omnibus bill.

Mr. Fred J. Fredrickson is here to speak briefly for the State and local sponsors in support of the project. I appreciate giving him time and I know that my people back home are also grateful for your courtesy.

Senator KUCHEL. Appearing here today is Mr. Fred J. Frederickson, who has a statement.

General, do you have someone who can tell us about this project?

General ITSCHNER. Colonel Starbird will be glad to testify.

Senator KUCHEL. If agreeable with you, Mr. Frederickson, we will hear from the colonel first.

Mr. FREDERICKSON. Yes, sir.

Colonel STARBIRD. The Heart River is a west branch tributary in North Dakota of the Missouri River. It is a river 241 miles long. It is a river in which the upper reaches are relatively sparsely developed. As you can see, however, there are two reservoirs on the river. The upper one is a Bureau of Reclamation reservoir for irrigation purposes alone. The lower one is a reservoir both for irrigation and for flood control.

Mandan is located 6 miles from the bank of the Missouri River, on the north bank of the Heart River.

This larger scale map shows Mandan and the area immediately adjacent thereto.

The distance from Mandan to the Sunny Brook Bridge is about 3 miles.

The channel capacity above the city of Mandan is roughly 8,000 cubic feet per second at the present time. Through the city of Mandan there have been put in certain improvements which I will describe later, which raise the capacity to around 15,000 cubic feet per second.

Below the channel deteriorates to the neighborhood of 4,000 cubic feet per second, at its mouth.

Mandan, itself, is a community of about 7,300 persons. It is a marketing center for a large section of the country. As I remember, it is a division point on the Chicago, Milwaukee & St. Paul Railroad.

There was authorized and partially constructed a flood-control project, the last work having been accomplished in 1950.

That work was for the protection of the city of Mandan proper and included a front line levee protecting a large section of the city and a section of the levee on the south bank to protect an industrial school.

That work cost the Federal Government in the neighborhood of $450,000. There is a certain element of the work still outstanding for accomplishment, and the new report recommends that that part of the work also be accomplished at some later date.

In 1951 and 1952, through this channel, which has been improved to a capacity of 15,000 cubic feet per second, about 30,000 cubic feet per second was poured. It was passed generally, safely, because of the freeboard we have above our design flow.

Senator KUCHEL. Where does the water go?

Colonel STARBIRD. The water comes down the river at the present time, following a course between those two levees, joins the channel here and flows on to the Missouri.

The heavy line, sir, is the improvement.

As I say, this 15,000-cubic-feet-per-second channel did take 30,000 feet; but in 1952 the levee was overtopped briefly.

The floods indicate clearly we must go up with these particular levees.

A reanalysis of the problem has been made and the reanalysis has shown that, for a distance of roughly 3 miles above the city, the agricultural areas can be given protection by the raising of a highway and by the putting in of a tieback levee, not shown on this map.

Also, the levee should be raised around Mandan and directly across from Mandan by an elevation of from 1 to 4 feet, in different portions.

Below Mandan the channel should be straightened to permit the more rapid exodus of the water from the Mandan area and also a

flanking levee put in so that ice jams will not be formed immediately adjacent to Mandan and cause backwater flooding from flows of the Heart River.

The total estimated cost to the Federal Government of the further improvements which I have described is $1,727,000.

The local interests will be expected to furnish the normal cooperation to include the raising of the highway.

The total estimated cost to the local interests is $463,830.

Local interests will also take over maintenance and operation at an estimated $5,000 a year.

The benefit-to-cost ratio of the project is 1.86 to 1.

The project has been recently referred to outside agencies for comment. The Governor of North Dakota has commented, concurring in the project.

Senator KUCHEL. Do we have any report from the Budget Bureau?

Colonel STARBIRD. We do not, sir. It has not been forwarded to the budget as yet.

I believe we also referred it to Agricluture and Interior, and we do not have their comments. Is that correct? Agriculture and Interior both got this for comment?

Mr. BRENNAN. Yes.

Senator KUCHEL. All right. Thank you very much, Colonel.

Now, Mr. Fredrickson, we will be happy to hear from you.

STATEMENT OF FRED J. FREDRICKSON, VALLEY CITY, N. DAK.

Mr. FREDRICKSON. Mr. Chairman, my name is Fred J. Fredrickson, and my home is in Valley City, N. Dak., where I have lived more than 40 years.

At this point, Mr. Chairman, I would like to have the statement of Senator Young inserted in the record.

Senator KUCHEL. I put it in, Mr. Fredrickson.

Mr. FREDRICKSON. Oh. He regrets being unable to be here personally.

Senator KUCHEL. Yes.

Mr. FREDRICKSON. And also Congressman Krueger of North Dakota has requested me to express to you his approval in support of this project and his hope that it can be included in the list of authorized projects in the omnibus bill.

I represent the North Dakota State Water Conservation Commission, of which the Governor is chairman. This is the official State agency having control of the water resources in my State.

Today I also represent the Board of Commissioners of the Lower Heart River Water Conservation and Flood Control District of Morton County, N. Dak., local sponsors of the proposed development on that river.

Prior to the consideration of this project by the Board of Engineers for Rivers and Harbors, the local sponsors prepared and submitted a rather comprehensive statement in support of the proposed improvements. This statement was accompanied by letters from the Governor and other State officials, and by resolutions from the Board of County Commissioners of Morton County, wherein the project is located, and from the board of city commissioners of Mandan and Bismarck, and from the chambers of commerce of those municipalities.

I shall not read the statement mentioned nor the exhibits accompanying the same, but ask that they be made a part of the record.

Senator KUCHEL. Without objection, that will be so ordered.

(The statement referred to is as follows:)

STATEMENT OF BOARD OF COMMISSIONERS, LOWER HEART RIVER WATER CONSERVATION AND FLOOD CONTROL DISTRICT OF MORTON COUNTY, N. DAK., WITH EXHIBITS

This statement is submitted by the Board of Commissioners of the Water Conservation and Flood Control District of the Lower Heart River, Morton County, N. Dak.

Said board and the Lower Heart River Water Conservation and Flood Control District were duly created, pursuant to the laws of the State of North Dakota, by the North Dakota Water Conservation Commission and the Board of County Commissioners of Morton County, N. Dak., to provide an effective and responsible agency through which local interest may cooperate and contract with the Federal and State governments in furnishing assurances and meeting local cooperation requirements involving the control, conservation, and use of water in connection with any Federal or State project for the improvement and development of the Lower Heart River in Morton County, N. Dak.

Pursuant to the laws of this State, this board, in addition to the powers set forth in the preceding paragraph, has the power and authority to levy general taxes and to levy special assessments against benefited property within the district for the payment of any costs which might arise in connection with any flood-control project which might be undertaken within the Lower Heart River Water Conservation and Flood Control District.

This board has studied the plans submitted by the Corps of Army Engineers for the control of the recurring floods of the Heart River, and has held public hearings to determine the sentiment of the people in this area in regard to said plans; and pursuant to such hearings, this board has found that the people in the area who would be affected in any way by the proposed flood-control project are unanimously in favor thereof and that the only differences in opinion in regard to the same were raised in relation to the extent of the benefits certain property owners might have should such a project be constructed. Accordingly, this board passed and adopted a resolution approving said plans.

Subsequent to said hearing, this board duly passed a resolution wherein it found, determined, and declared that it is necessary for said district to construct the flood-control improvements for the Lower Heart River in accordance with the plans and estimate of cost therefor prepared by the Corps of Army Engineers.

This board is prepared to cooperate and contract with the Federal Government and to furnish such assurances and requirements as may be necessary or desirable in order to expedite an early approval of the plans for the flood control of the Heart River in Morton County, N. Dak.

STATEMENT ON FLOOD CONTROL OF THE LOWER HEART RIVER IN THE VICINITY OF MANDAN, N. DAK.

1. Basic reference

Basic information contained in the Review Report on Flood Control, Lower Heart River as prepared and presented by the Corps of Engineers, United States Army, Garrison District, Riverdale, N. Dak., under date of February 1954, has purposely been omitted in this statement. Such use of data would merely be a repetition of the findings. The aforementioned report will be referred to as the corps report throughout this statement.

2. Current history of Mandan

Since the basic data for the corps report were obtained, changes have come about in the general area that increase the necessity for favorable consideration of this proposed project.

Present day Mandan is a community with a conservatively estimated population of 9,000, as compared to the 1950 census figure 7,298. An oil refinery of 30,000-barrel-per-day capacity will be completed in October 1954 at the north city limits. Personnel from that refinery has already and will continue to take up residence in the city. A steam generating plant with an ultimate capacity of 125,000 kilowatts is also being constructed adjacent to the city limits to the north. The first unit with 25,000 kilowatts capacity will be completed in the fall of 1954. Personnel from this plant will reside in the city of Mandan. Light aggregate

processing is another industry that has been established at the west city limits of the community. Two truck transport terminals have been established within the city limits. These terminals presently accommodate and dispatch 100 transports daily to serve the trade area in all directions from the city. A crude-oil pipeline from the rich Tioga oil fields terminates at the refinery. A finished products line links the refinery with markets to the east extending to Whiting, Ind. Thirty-eight new mercantile, hard merchandise, and service businesses have been established inside the city limits. Eight new establishments have been erected and conduct business along United States Highway No. 10 between Mandan and Bismarck.

All of these enterprises are directly concerned with flood control and flood protection in addition to the already existing and established organizations covered by the Corps of Engineers' report.

3. Flood control history of area

The city of Mandan and its environs has always been cognizant of flood threats and the necessity for adequate protective works. At the risk of repetition, the following works were effected in the area of the lower Heart River. The earliest works were started at the turn of the century by the Northern Pacific Railroad Co. and consisted chiefly of channel changing of the Heart River west of Mandan, and constructing levees around the roundhouse and shops. The Russell-Miller Milling Co. (now Occident) built protective works around its installation at the edge of the River. The city of Mandan was instrumental in and contributed toward channel changing and rerouting of the river at the south edge of the city, in addition to providing a levee along the left bank of the Heart River between the Mott Line Bridge and the West Bluff in the city limits. The State training school also constructed a levee on the right bank of the river extending from its buildings to a junction with the Northern Pacific Railway Co. right-of-way at the west edge of the city of Mandan.

Below the city of Mandan, efforts to control the Heart River floods were instituted by the State highway department in conjunction with the cooperation with property owners along United States Highway No. 10. A levee on the left bank was constructed in the late thirties to protect the highway and the landowners below the city. The United States Soil Conservation Service enclosed its entire nursery with a levee system. The Northern Pacific Railway Co. provided a channel straightening and channel shortening change. The city of Mandan and Morton County effected tree and brush removal in the channel area below the city to alleviate ice jamming and stoppages.

All of these efforts were made over a period of 40 years in an attempt to stem the floodwaters and resultant damage from the Heart River. In addition to these measures, the city of Mandan, in the 1890's, established a levee at the then eastern limits of the city to keep out the floodwaters of the Missouri River.

The severity and intensity of Heart River floods increased from 1938 onward, as will be revealed by the corps report. One of the chief contributing causes for the apparent increase in flood intensity is the denuding of the upstream flood plains of the river of natural growths, either by man or as the result of the droughts of the early 1930's. This factor, coupled with record-breaking runoffs has resulted in nullifying the efforts to control the river at Mandan prior to 1949. After the construction of the present levee system completed in 1950 as authorized by Congress and under Corps of Engineers supervision, the city proper has had no flooding of its areas. The present levee system will be discussed elsewhere in this report. Exact lengths, costs, and effects of the above works are listed in detail in the corps report. The areas above and below Mandan, however, did have the greatest difficulties yet experienced from floodwaters.

4. In addition to the protective works which were constructed, the city of Mandan, since 1946, has maintained an elaborate flood-fighting organization. Prior to 1946, this organization existed as a skeleton force directed and supervised by the Fort Peck District engineer. At the suggestion of the Fort Peck District engineer, the city did organize and does presently maintain a flood-fighting organization coordinated with the efforts of the Corps of Engineers, Garrison District.

5. Flood history of Mandan and area

The corps report covers thoroughly and in detail the history of floods, and resultant damage in the area. However, the 1943 high water and resultant flood, together with the 1952 high water and resultant levee overtopping will be dis-

cussed here in the light of additional information and observations of effects and potential effects.

The 1943 flood was the flood of greatest magnitude and most damage yet experienced from Heart River waters. One life was lost as the result of the 1943 flood at Mandan. Other floods of similar magnitude were experienced by the city in 1881, 1887, and 1910, but were caused chiefly by the backwaters of the Missouri River rather than the Heart River. Property damage was much less than 1943.

Damages listed as the result of the 1943 flood for the city of Mandan showed a total estimated value of $659,000 in the corps report. This figure does not take into account, and rightly so, hidden damages that were not perceptible and tangible at the time of the survey. Footing failures and settling of buildings has occurred as the result of aggravation of subsoil conditions by the 1943 floodwaters. Business places along Main Street in Mandan, who felt that their only damage in the 1943 flood was water damage and merchandise loss, are now finding that settlement and footing failures are showing up. Two churches and the community owned memorial building are showing the effects of footing failures. A survey of these buildings and remedial measures necessary to correct the faults indicates that an additional expenditure of $80,000 have been or will have to be made, which cost should be attributed to 1943 flood damage.

Other factors, which as yet are not tangible, that enter into the flood damage consideration are the accelerated deterioration of structures, particularly wooden structures. This deterioration is readily observable by comparison. Structures that were partially inundated in the 1943 flood show a greater degree of deterioration and subsequent upkeep as compared with similarly constructed buildings that escaped the 1943 high water. Part of the public records in the city hall and in the memorial building were lost or damaged and their true value overlooked until subsequent needs have brought about a jolting realization that funds are now being expended to reestablish most of these records, and many of the records will never be replaced because of their complex or temporal nature.

6. Present protective works

As a result of congressional authorization and expenditure of Federal and local interest funds, the Corps of Engineers planned, contracted for, and supervised the present protective works around the city of Mandan. This work was started and substantially completed in 1949, giving the city its first protection behind the new works during the spring of 1950. These works were designed upon the experiences of prior floods in the area, reinforced by the knowledge of flood-control works of the corps. Subsequent observations of the 1950 and 1952 floods indicated that the present protective works would be ineffective under conditions that could normally occur in the lower reaches of the Heart River.

Discharges in 1950 and 1952 indicated the type of discharge that may be expected in the future. These discharges of 30,500 cubic feet per second in 1950 and 30,000 cubic feet per second in 1952 at Mandan exceeded the design flow of the present system.

The 1952 discharge overtopped, for a short time, the present levee for approximately 1,000 feet in the lower reaches of the levee. This overtopping was caused by an ice jam in the Heart River below the lower end of the levee. Timely breeching of the railroad grade saved the levee system from being topped over a prolonged period.

The present low point on the existing levee is at elevation 1,651.0 feet mean sea level located at the junction of the levee with the Northern Pacific south branch at the Mott line bridge O. The low point of the 1943 protective works was also located in this immediate vicinity and was at elevation 1,644.8 feet mean sea level. The resultant crest level of the flood in the city of Mandan for the 1943 flood was elevation 1,647.3 feet.

Under present conditions and with the present protective works, the waters of a standard project flood of the proportions indicated in the report would produce a crest elevation flood of at least 1,651.0 feet within the city of Mandan should the project floodwaters overtop the present protective works. That this is possible can be recognized by the fact that the discharge of 1952 did top the levees, and this discharge is only 60 percent of the design capacity of 50,000 cubic feet per second proposed in the modification of the levee works. Further, the effects of ice jamming are the unknown factors and experience indicates that ice jamming of the nature encountered in 1952 is not unreasonable to expect anywhere along the lower reaches of the river in the vicinity of Mandan.

The elevation 1,651.0 is reasonable to assume since it represents the lowest point on the levee system and the point at which any outflow of overtopping

waters would be expected. How much higher than elevation 1,651.0 the crest would be is entirely dependent upon the elevation of the crest waters. These crest waters would have to be higher than elevation 1,651.0 in order to overtop the levee. With proper ice and water discharge combinations the possibility of overtopping can become a reality. Again it is pointed out that this did occur in the 1952 runoff under conditions that can duplicate themselves.

When this does occur, there will be a period ranging from 8 hours to 10 days in which the incoming waters will be at an elevation greater than the low point of the present levee system, indicating that cresting and leveling off of the floodwaters will be over a period sufficient in length to inundate all of Mandan to the magnitude of the 1943 flood plus an additional 62 blocks. In addition to the business district of 1943, this would embrace the remaining business area, thereby inundating the entire business district. A public grade school, junior high school, and the only senior high school, 8 of the 9 churches, and approximately 150 homes would be involved which escaped the damage of the 1943 flood. Three trunkline sanitary sewage lift substations would be rendered inoperative because of submergence. These lift stations serve an estimated population of 2,000, of which number one-half would be outside the inundated area. In addition, submerging of manholes serving the main collector sewer would render the main lift station inoperative because of insufficient capacity to pump the additional floodwaters finding their way into the system through the manholes. This main lift is used during periods of high water in the Heart River to discharge sewage against the head of the floodwaters. With the failure of this station, the entire sanitary sewer flow of the city would be stopped.

Experience of the 1948 and 1949 floods indicates that if ice also rides in on the flood crest, shearing of hydrants will result. Attempts to shut off hydrants under water are futile, as past experience has proven. The shearing off of more than two hydrants would tax the water-treatment facilities to a point where the domestic supply would be jeopardized because of the inability to produce safe drinking waters at the rate of demand created.

Because of the season of the year when most floods occur, the freezing temperatures that prevail could raise havoc with inundated structures by the effects of resultant ice pressures. This was experienced in the 1943 flood. Not only were structures affected, but service lines and interior piping froze with residual damage.

8. Tabulation of potential effects and damage

This tabulation lists only those items that are of major importance to the community. Since Mandan represents the concentration of investment and economic influence, the damages resulting thereto are enumerated below as they would become realities when the present levee is overtopped for a prolonged period.

(*a*) The entire economy of the community would be halted because of the inundation of the entire business district, railroad yards, telephone switching facilities, natural gas-control stations, electric light and power substations, highway facilities, and sewer and water facilities. Such a disruption would continue for the duration of the period of inundation and for such period of time thereafter necessary to salvage, repair, clean up, and perform such other post-flood operations as are necessary to make all units operative again. Based upon returns as tabulated by the Federal Reserve bank for this area, this would amount to $100,000 daily. This figure represents only the across-the-counter business and does not include property or real-estate losses.

(*b*) Transcontinental highway and rail facilities would be disrupted at this point. The Northern Pacific roundhouse, shops, and yards would be completely inundated and submerged. United States Highway No. 10 between Mandan and Bismarck as it exists today would be submerged below at least 6 feet of water. No intrinsic value can be placed upon the delay or disruption of rail and highway transportation since more than the local area is involved. All highway and rail traffic would have to be rerouted either to the north or to the south, which would mean bypassing most of southern North Dakota with transcontinental shipments, and the resorting of freight at terminals other than those designed for the breakdown.

(*c*) Merchandise and stock damage would amount to over $500,000 based upon 1953 inventories as submitted for tax purposes.

(*d*) Based upon the experience of the 1943 flood and upon the taxable evaluation of real estate for 1953, the resulting permanent damage would amount to slightly over $3 million. This damage would be to machinery, boilers, heating plants, air-conditioning equipment, industrial equipment, lumber yards, structures, municipal facilities, motors, transformers, and special equipment for natural gas

control. In addition to the foregoing, damage to streetlighting transformers, underground cables, street paving, storm sewer system, sanitary sewer system, and waterworks facilities exclusive of the mechanical equipment, would amount to an estimated $750,000.

(e) Approximately 350 homes, 40 percent of which are at least two-family dwellings, would be inundated with resultant damage to footings, household goods and items in basement and first-floor installations—2,500 persons would be homeless as a result of this.

(f) Three hotels (100 percent), three motels (75 percent), two trailer courts (100 percent), all restaurants and eating establishments, would be inoperative thereby incommoding an additional 800 persons.

(g) Two public grade schools serving 60 percent of the grade-school population, one junior high school serving 50 percent of the junior high population, and the only high school in the community would be inundated. The machinery for the heating and ventilating systems for these schools would become total losses.

(h) Incalculable acceleration of deterioration of structures caught in the wake of the flood would be experienced.

(i) All buildings suitable for evacuation and disaster purposes would be inundated and inoperative during the period of inundation.

(j) All municipal and county records and offices would be inoperative during the period with a threat to destroy records that could not be moved prior to the inundation.

(k) All sanitary sewage from the higher elevations would be discharging into the flooded area.

(l) Water treatment and safe domestic waters would be jeopardized.

(m) Medical facilities, public and private, would be inoperative except for the 50-bed hospital which is located on higher ground.

In summary, much of the damage created by overtopping of the present protective works for a prolonged period would be irreparable, with at least 10 percent of the businesses unable to start out again. Insofar as the city of Mandan is concerned as an economic unit it would be retarded at least 10 years before it would again approach its present effectiveness and service to the community.

A further consideration of damage as a result of a flood of this magnitude is the possible loss of the major portion of the protective works now existing. To date there has been a total investment by the Federal Government of $480,143.62, and local interest expenditures of $138,584. Experience of the 1948 and 1949 flood indicate that such a loss is very probable since water on both sides of the levee system draws the frost. The subsequent softening of the levees permits rapid erosion and disintegration.

Other damages in the reaches covered by the proposed project have been accurately and thoroughly covered in the corps report. However, attention is directed to the fact that since that report was prepared, many new businesses have been established along United States Highway No. 10 in the area normally inundated by the floodwaters. These new enterprises would increase the flood loss figures calculated for this reach by at least 15 percent. Also, a flood of the magnitude that would overtop the Mandan protective works would also top the State Training School levee inundating all of the dormitories, powerhouse, administrative buildings, workshops, and part of the food-storage facilities.

One of the greatest losses on which no monetary value can be placed is the loss of many private water supplies in the entire area, including approximately 80 such supplies in the city of Mandan. Although the actual installations may not be mechanically damaged, the aquifers and water pockets can become contaminated. Such a contamination would be many months in reducing, and in some instances may never be reduced because the underground source would be so highly contaminated.

In the 1952 flood 642 persons were directly involved in the flood fight, with an additional 400 on call. This represents well over 14 percent of the population at an expenditure of $18,000 by the city of Mandan even though much of the help was volunteer help.

9. Effect of proposed plan

The present protective works, although substantial and effective to date, cannot continue to stand by themselves if anticipated climatic and runoff conditions materialize. Effects of this probability are thoroughly covered in the corps' report in appendix III.

Experience and cause and effect studies show that the basic problem confronting the area is one of providing uninterrupted flow of ice and floodwaters through a

constricted channel and water-course area in the vicinity of Mandan. Water alone would be no serious problem.

The proposed plan, subdivided into the three units, contains the solution to the basic problem at a reasonable first cost. The shortened and direct channel run from the lower limits of Mandan to the Missouri River together with the 2,000-foot-wide floodway will alleviate ice passage and eliminate many of the observed points of jamming in the lower reaches of the Heart River.

A strengthening and raising of the existing levee system at Mandan combined with a free water passage provided by the trestle opening in the South Branch grade and the bridge raising and highway raising will definitely provide a positive protection to the city. The trestle opening in itself will alleviate the backwater threats by allowing the passage of water to the lower reaches even though ice jams may occur below the city. The raised levee system will provide the necessary buoyancy for ice floatage enhancing the probabilities of free ice flow through the reaches of the river adjacent to Mandan. Raising of the highway bridge, and provisions for the elevating of the railroad bridge during high water will insure maintenance of velocities in the stream sufficient to carry the ice. Location of the pumping station at the toe of the levee on the sewer outfall line will eliminate the possibility of interior failures that would inundate portions of the city as experienced in the 1949 flood.

The blanketing of Highway No. 10 and the installation of a levee at the Sunny Bridge location west of Mandan will afford protection to 14 homes and properties affected by the floodwaters of this reach. Among the properties that would be protected is the State training school farm with its large and expensive barns, brooder houses, silos, and machine sheds. This unit alone could not be duplicated for less than $100,000 on today's market. All persons behind this protective works are unqualifiedly in favor of the project. The value of other properties that would be located behind the Sunny unit would approximate $140,000.

10. Project support by local interests

The project as proposed and described in the Corps of Engineers' report has received the full endorsement and support of the following listed agencies:

Governor, State of North Dakota, exhibit A
Water Conservation Commission of the State of North Dakota, exhibit B
Superintendent, State training school, Mandan, N. Dak., exhibit C
Board of Commissioners, Morton County, N. Dak., exhibit D
Board of Commissioners, city of Mandan, N. Dak., exhibit E
Board of Commissioners, city of Bismarck, N. Dak., exhibit F
Mandan Chamber of Commerce, exhibit G
Bismarck Chamber of Commerce, exhibit H
District health officer, Custer Health District, exhibit I
Senior sanitarian, city of Mandan, N. Dak., exhibit J

EXHIBIT A

MAY 27, 1954.

RESIDENT MEMBER,
Board of Engineers for Rivers and Harbors,
Corps of Engineers, United States Army,
Washington, D. C.

DEAR SIR: The protective works proposed by the Corps of Engineers, United States Army, for the lower Heart River area in the vicinity of Mandan, N. Dak., are urgently needed. The facilities proposed in this plan in conjunction with the Heart Butte Dam and existing flood-protective works will prevent the extensive damage caused by the frequent floods this area experiences.

Recently the Lower Heart River Water Conservation and Flood Control District was organized by the North Dakota State Water Conservation Commission upon petition of local agencies. This organization, which represents the local people, recognized the acute need for providing necessary flood protection for lower Heart River area and are working toward this end.

As Governor of the State of North Dakota and chairman of the State water conservation commission, I sincerely urge the early consideration and approval by the Board of Engineers for Rivers and Harbors of the Corps of Engineers, United States Army of the plan of the Corps of Engineers to provide flood protection for the lower Heart River area.

Sincerely yours,

NORMAN BRUNSDALE, *Governor.*

50931—54——14

EXHIBIT B

NORTH DAKOTA STATE WATER CONSERVATION COMMISSION,
Bismarck, N. Dak., May 26, 1954.

RESIDENT MEMBER,
Board of Engineers for Rivers and Harbors,
Corps of Engineers, United States Army,
Washington, D. C.

DEAR SIR: The North Dakota State Water Conservation Commission is the official State agency having control and jurisdiction over the waters of the State of North Dakota. It was by the action of the Commission upon request of the local people that the Lower Heart River Water Conservation and Flood Control District was organized for the primary purpose of finding a method to provide full flood protection for the lower Heart River area and initiating the construction of such protective works.

The plans and proposals of the Corps of Engineers, United States Army, for the protection of this area have been reviewed and approved by the State water conservation commission. It is the opinion of the commission that the facilities proposed in these plans, including the levees and channel straightening features, will provide the protection required for the lower Heart River area and the city of Mandan from the possibility of future disastrous floods.

The commission feels that the proposed project for the lower Heart River area as described in the plans of the Corps of Engineers should be undertaken without delay. It is highly desirable that his area be protected from the almost regular floods that it has been subjected to in the past.

We respectfully urge the Board of Engineers for Rivers and Harbors of the Corps of Engineers, United States Army, to approve the plans for the construction of the features proposed by the Corps of Engineers to provide flood protection to the lower Heart River area.

Yours very truly,

J. J. WALSH,
Secretary and Chief Engineer, State Engineer.

EXHIBIT C

MAY 27, 1954.

RESIDENT MEMBER,
Board of Engineers for Rivers and Harbors,
Corps of Engineers, United States Army, Washington, D. C.

DEAR SIR: I have just received notice of the hearing which is to take place before your Board on June the 11th for the purpose of considering the plan of flood control for the Lower Heart Water and Conservation Flood Control District. The interests of the school are vitally concerned with the intentions and plans of this project which seem to be the solution to the flood difficulties that exist each year on the Heart River in this district.

The support and assistance given by the Army engineers and the Government in the present dike system has been of real benefit but we do know that the problem will still be present unless further action is taken to clear the channel and the obstruction that now presents a hazard in case of flood or high water. Our school with its great area and large personnel is vitally interested because we are among the first to feel the effects of a flood in this area. The damage from it has run into many thousands of dollars.

We, therefore, wish to express our approval and deep concern in the possibility of having this project approved and underway at the earliest possible date. We assure you of our support in working out the program under this project and our assistance to the commissioners of the Lower Heart River Water Conservation and Flood Control District and the Army engineers in whatever capacity required.

Sincerely yours,

L. G. THOMPSON, *Superintendent.*

EXHIBIT D

RESOLUTION

Whereas the city of Mandan and the county of Morton contain within their boundaries the portion of the Heart River known as the lower Heart River, and

Whereas, in each year of high water, said city of Mandan and portion of Morton County have suffered flood damage in the extent of thousands of dollars; and

Whereas the welfare of the said city of Mandan and county of Morton are a matter of direct concern to this board; and

Whereas this board favors as a matter of general policy the development of this area and the protection of the lives and property of the persons living therein; and

Whereas the Corps of Engineers has offered a plan whereby these ends may be accomplished: Now, therefore, be it

Resolved, That this board of commissioners of the county of Morton go on record supporting flood control within this county in general and the plan of the Corps of Engineers in particular.

On rollcall all voted "aye." Motion carried.

STATE OF NORTH DAKOTA,
County of Morton, ss:

I, Ora Henderson, the duly appointed, qualified, and acting auditor of the county of Morton, State of North Dakota, do hereby certify that the foregoing is a true and correct copy of resolution as passed by the Board of County Commissioners of Morton County, N. Dak., at their meeting held on June 3, 1954.

Dated at Mandan, N. Dak., this 4th day of June 1954.

[SEAL]

ORA HENDERSON,
County Auditor, Morton County, N. Dak.

EXHIBIT E

EXTRACT OF MINUTES OF THE REGULAR MEETING OF THE BOARD OF CITY COMMISSIONERS OF THE CITY OF MANDAN, MORTON COUNTY, N. DAK., JUNE 1, 1954

The board of city commissioners met in regular session in the city hall in the city of Mandan, Morton County, N. Dak., on Tuesday, June 1, 1954, at 7:30 p. m. Present: President Handtmann, Commissioners Oster, Gress, Schantz, and Schuch.

Commissioner Schantz introduced the following resolution and moved its adoption:

RESOLUTION

Whereas the city of Mandan, Morton County, N. Dak., and the surrounding territory has suffered from the recurrent flooding of the Heart River, which has caused untold damage to property and loss of lives, all of which has seriously affected the growth and prosperity of the community as well as having a detrimental affect on property values within the area; and

Whereas, although the present levee system protecting the city of Mandan was completed in 1950, the same proved to be inadequate to protect the city during the high water of the flood experienced in the spring of 1952; and,

Whereas the State Water Conservation Commission, pursuant to the petition of this board heretofore duly created the water conservation and flood-control district of the lower Heart River, for the purpose of providing a responsible governmental agency to represent this city as well as other interested persons in securing adequate flood-control measures for this area; and

Whereas it is necessary and essential to the well-being of this city that the necessary flood-control measures be commenced at the earliest possible moment to forestall any further losses of lives and property, which will certainly result if present flood-control facilities on the lower Heart River are not improved; and,

Whereas the Corps of Army Engineers, Garrison District, have heretofore completed plans for improved flood-control facilities for the city of Mandan and surrounding area, which plans have been heretofore studied and approved by this board, and which plans are presently being studied by the Board of Engineers for River and Harbors: Now, therefore, be it

Resolved by the Board of City Commissioners of the city of Mandan, N. Dak., as follows:

1. That this board hereby urge the careful consideration of the problems affecting the lower Heart River in order that this area may have adequate flood-control facilities at the earliest possible moment.

2. That the city of Mandan, N. Dak., by and through this board hereby pledges its full support to the plans of said Corps of Army Engineers for the flood protection and control measures as the same affect this city.

3. That the city of Mandan, N. Dak., by and through this board hereby agrees to furnish such assurances and agreements of cooperation as may be necessary and desirable to assure the early approval and completion of said flood-control project.

4. That the city auditor is hereby authorized and directed to furnish a certified copy of this resolution to the board of water conservation and flood control commissioners of the lower Heart River, Morton County, N. Dak.

Dated this 1st day of June 1954.

JOHN HANDTMANN,
President, Board of City Commissioners, city of Mandan, N. Dak.

Attest:

ARNOLD T. LIVDAHL,
City Auditor.

The motion for the adoption of the foregoing resolution was duly seconded by Commissioner Gress, and upon rollcall vote being taken thereon, the following voted in favor thereof: Commissioners Schantz, Cress, Oster, Schuch, and President Handtmann, and there being no votes cast against the same, said resolution was declared duly adopted, and was signed by the president, which was attested by the city auditor.

STATE OF NORTH DAKOTA,
County of Morton, ss:

I, Arnold T. Livdahl, the undersigned, being the duly appointed, qualified, and acting city auditor of the city of Mandan, N. Dak., do hereby certify that I have compared the attached and foregoing extract of minutes with the original on file and of record in my office, and that the same is a full, true, and correct transcript of the minutes of the meeting of the board of city commissioners in the said city, duly called and held on the date therein indicated so far as such minutes relate to the action of said board in regard to the water-conservation and flood-control project of the lower Heart River, Morton County, N. Dak.

Witness my hand and the seal of said city on this 1st day of June 1954.

ARNOLD T. LIVDAHL,
City Auditor.

EXHIBIT F

RESOLUTION

Whereas the plans for controlling the floods occasioned by the Heart River in Morton County, N. Dak., will greatly facilitate the economic development of Bismarck and its vicinity and will assure the orderly growth and development of the economic well-being of this territory: Now, therefore, be it

Resolved, That the Board of City Commissioners of the City of Bismarck, N. Dak., recommend that plans presented by the Corps of Army Engineers for the control of flooding on the lower Heart River be approved and authorized at an early date in order that the communities of Bismarck and Mandan may continue to grow along natural lines for the betterment of all the people in these communities: be it further

Resolved, That a copy hereof be presented to the Chief of Army Engineers, Washington, D. C.

Dated this 3d day of June 1954, at Bismarck, N. Dak.

BOARD OF CITY COMMISSIONERS OF
THE CITY OF BISMARCK, N. DAK.,
By EVAN E. LIPS, *President.*

Attest:

WM. BAKER, *Secretary.*

EXHIBIT G

RESOLUTION OF CHAMBER OF COMMERCE OF MANDAN, N. DAK.

Whereas for many years the damaging floods of the Heart River in the vicinity of Mandan have seriously depressed property values and have impaired flow of commerce to and from the city and caused huge losses of property to an extent which has seriously hampered the development of trade and businesses within this community; and

Whereas the membership of this association has for many years actively promoted the development of adequate flood protection for the city of Mandan, as well as adequate flood-control facilities in the adjacent area to the end that the flood menace of the Heart River be eliminated once and for all: Now, therefore, be it

Resolved, That the Chamber of Commerce of the city of Mandan, N. Dak., urge the early approval and authorization of the proposed plan of flood control for the lower Heart River in Morton County, N. Dak., in order that said project might be undertaken at the earliest possible moment; and be it further

Resolved, That we pledge our support to the accomplishment of this objective, and do hereby assure the Government of the United States of the required local cooperation in connection therewith; and be it further

Resolved, That a copy hereof be forwarded to the Chief of Army Engineers, Washington, D. C.

Dated at Mandan, N. Dak., this 2d day of June 1954.

CHAMBER OF COMMERCE OF MANDAN, N. DAK.,
By H. B. UDEN, *Its President.*

Attest:

J. I. ROVIG, *Its Secretary.*

EXHIBIT H

RESOLUTION

Whereas the recurring floods of the Heart River, by inundating U. S. Highway No. 10 between the cities of Bismarck and Mandan, N. Dak., have caused serious stoppages of the flow of traffic to and from said cities, which because of their close proximity are dependent upon one another for their economic life and

Whereas said flooding has also interrupted the transportation of passengers and goods via the Northern Pacific Railway Co. to the detriment of the economic development of these communities; and

Whereas the plans of the Corps of Army Engineers for flood control facilities on the Heart River in Morton County, N. Dak., will alleviate the stoppage of traffic on these two great means of transcontinental transportation: Now, therefore, be it

Resolved, That the Chamber of Commerce of the city of Bismarck, N. Dak., gives it full support to the plan proposed to alleviate flooding of the area between Mandan and Bismarck and hereby urge the early approval and authorization of such plans in order to secure early flood protection for this area: Be it further

Resolved, That a copy of this resolution be forwarded to the Chief of the Army Engineers, Washington, D. C.

Dated this 3d day of June 1954.

CHAMBER OF COMMERCE OF BISMARCK, N. DAK.,
By E. V. LAHR, Jr., *Its President.*

Attest:

A. J. SHRINER, *Its Secretary.*

EXHIBIT I

JUNE 3, 1954.

RESIDENT MEMBER, BOARD OF ENGINEERS, RIVERS AND HARBORS,
United States Army Corps of Entineers, Washington, D. C.

DEAR SIR: Having been a practicing physician in Mandan for 30 years, the last 3 as district health officer, I have been in a position to see the hardship mentally, physically, and economically that is caused by the flooding of Mandan and vicinity by the Heart and Missouri Rivers.

These people live in constant fear of a flood and, of course, when it did occur the results were self evident. Damage to property, contamination of water and food supplies, interference with sewage facilities are some of the hazards encountered. All these create a public health problem.

As long as conditions exist which tend to produce a flood, people that are likely to be involved just live from year to year in constant fear.

Progress has been made in the prevention of these catastrophes but more can be done to insure against a repetition of previous experience.

Yours very sincerely,

CECIL C. SMITH, M. D.,
District Medical Officer.

EXHIBIT J

MAY 27, 1954.

RESIDENT MEMBER, BOARD OF ENGINEERS, RIVERS AND HARBORS,
United States Army Corps of Engineers,
Washington, D. C.

DEAR SIR: Regarding the proposed flood-control program on the lower Heart River, to confine this river to an adequate channel and prevent further flooding of Mandan and surrounding area.

This department recommends that this project be constructed to eliminate the creation of future public health hazards that occur as the result of such floods.

The people of Mandan and surrounding area have encountered many serious problems and conditions in past years due to such floodwaters. These problems and conditions are as follows.

The business district of Mandan is located in the lower portion of the community. During floods the sanitary sewers fail to function due to back pressure. This results in gross contamination of large volumes of food stocks and other materials in basement storerooms. A large percentage of this material must be condemned.

A large portion of the residential district is also located in this low area. These structures and their contents are also subjected to contamination by sewage and the floodwaters.

A number of business establishments and residences are located on Highway No. 10 east of Mandan. These structures and their contents in the majority of floods were heavily damaged, private wells grossly contaminated, and the business establishments especially those dispensing food and drink were required to do a complete decontamination of their properties.

These floods not only create a serious public health hazard to the people of Mandan, but also to other areas. A number of sizable food processing plants are located in Mandan. These processors distribute milk, ice cream, butter, meat products, bakery goods, and other foods through North Dakota, and a large percent of the butter is shipped to eastern markets.

Trusting that this information will be of some assistance to your staff in eliminating this public health problem.

Yours truly,

VINCENT KAVENEY,
Senior Sanitarian.

Mr. FREDRICKSON. The city of Mandan and vicinity experienced very serious floods from the Heart River in 1943 and 1952.

I have a few flood pictures from the Heart River in those years which I hope the chairman and others members of the committee will look at. These pictures not only show the deep flood waters in the city but also indicate the threat of ice jams to bridges and, as Senator Young points out, heavy damage to farmlands from large ice deposits and debris left by the high waters.

One farmer whose land was badly damaged by this debris in 1952 told me he spent $2,300 to remove the trees, rocks, and gravel carried onto his land.

It is a recurring damage and is not only costing the farmers a great amount of money, but is gradually ruining the land.

As Colonel Starbird has said, Mandan is an important division point—may I correct him—of the Northern Pacific Railway Co.

I think you said Chicago, Milwaukee & St. Paul.

Colonel STARBIRD. Yes.

Mr. FREDRICKSON. Flooding of its tracks and facilities there is not only a local damage but oftentimes interferes with and interrupts interstate travel. Such condition is also applicable to travel on transcontinental United States Highway No. 10 at that point.

I further wish to point out that since completion of the existing flood-protection works the city of Mandan has had an increase of about 2,000 inhabitants and there has been much industrial building activity. The Standard Oil Co. is just now completing a 30,000 barrels per day capacity oil refinery which serves the newly developed Williston oil basin. A 125,000 kilowatt steam-generating plant is under construction, and about 40 new smaller industries and businesses have been established.

I shall conclude, Mr. Chairman, with the fervent plea on behalf of those I represent that the project be authorized in the omnibus bill now before the committee.

Senator KUCHEL. Thank you very much, Mr. Fredrickson. Although I am alone in the subcommittee, I shall see that the committee has a complete report.

Without objection, we will incorporate in the record at this point the memorandum concerning the Heart River project.

(The memorandum referred to is as follows:)

HEART RIVER AT MANDAN, N. DAK.

(Report of district engineer, February 15, 1954)

Location: Rises in southwestern North Dakota, and flows easterly approximately 241 miles to its confluence with the Missouri River about 6 miles southeast of Mandan, N. Dak.

Report authorized by: Committee on Public Works of the United States Senate, resolution adopted June 1, 1948.

Existing project: Provides for construction of levees and appurtenant works along the left bank of the Heart River for the protection of municipal areas and along the right bank of the Heart River for the protection of the State training school.

Plan of recommended improvement: Additional flood protection for Mandan, N. Dak., including the reach, Sunny to Mandan, an area extending 3 miles upstream, and the downstream reach, Mandan to mouth, a distance of about 3½ miles, by means of channel improvement, levees, a highway bridge raise, a railroad bridge lifting device, highway embankment earth blanketing, and appurtenant structures.

Estimated cost:

As of June 1953:	
Federal	$1,727,000
Non-Federal	463,830
Total	2,190,830

Local cooperation: Raise the existing United States Highway 10 bridge and approaches west of Mandan; cooperate in construction of the Mandan interior drainage works, in addition to the usual assurances required.

Project economics:

Annual charges:	
Federal	$60,524
Non-Federal	21,824
Total	82,348
Annual benefits: Flood control	153,300
Benefit-cost ratio	1.86

Senator KUCHEL. General, do you have any further comments to make to the subcommittee?

Gentlemen?

General ITSCHNER. I have nothing further, sir.

Senator KUCHEL. Thank you very much, gentlemen.

That will conclude the subcommittee hearing.

(Whereupon, at 5:20 p. m., the hearing was closed.)

(Additional statements received are as follows:)

STATEMENT BY SENATOR ALTON A. LENNON, OF NORTH CAROLINA, IN SUPPORT OF A PROPOSAL TO REIMBURSE THE STATE OF NORTH CAROLINA PORTS AUTHORITY FOR WIDENING A CHANNEL IN THE HARBOR AT WILMINGTON, N. C.

Mr. CHAIRMAN. I desire to add my support to this proposal to reimburse the ports authority of the State of North Carolina in the amount of $65,000 which was spent by the ports authority of North Carolina as an emergency measure.

The subcommittee now has all of the facts in this matter, and I do not desire to further broaden the record with these details. I do desire to strongly emphasize that this project at Wilmington Harbor was authorized and would have eventually been done by the Army engineers as a part of the Federal project for the harbor. It was necessary for the ports authority to complete, at its expense, this phase of the project. The State ports authority is, therefore, simply asking for a reimbursement of these funds expended to alleviate the emergency condition.

I urge favorable consideration of this bill, S. 2415.

AMERICAN MERCHANT MARINE INSTITUTE, INC.,
Washington 6, D. C., July 26, 1954.

Re River and harbor projects, 1955, H. R. 9859.

Hon. EDWARD MARTIN,
Chairman, Committee on Public Works,
United States Senate, Washington, D. C.

DEAR SENATOR MARTIN: The American Merchant Marine Institute, representing the owners of a substantial majority of American-flag shipping of all categories, desires by this letter to record its strong support for all essential deep-water navigation-improvement projects, which are the subject of consideration by your committee and which are contained in H. R. 9859, now pending in the House of Representatives (H. Rept. No. 2247).

In particular, the American merchant marine desires by this letter to urge your early and favorable action upon the following projects which are included in H. R. 9859:

Portsmouth Harbor and Piscataqua River, Maine and N. H.
Lynn Harbor, Mass.
Weymouth Fore River, Mass.
Town River, Quincy, Mass.
Fall River Harbor, Mass.
Hudson River, N. Y.
Hackensack River, N. J.
Inland Waterway from Delaware River to Chesapeake Bay, Del. and Md.
Norfolk Harbor and Thimble Shoal Channel, Va.
Savannah Harbor, Ga.
St. Joseph Bay, Fla.
Mobile Harbor, Ala.
Sabine-Neches Waterway, Tex.
Columbia River at the mouth, Oregon, and Washington.

In addition, we urge that your committee, when it considers this legislation, include therein by way of amendment appropriate provision to authorize the survey and examination by the Chief of Engineers of the James River Channel from Newport News to Richmond, Va., in order to determine necessary improvements in this channel, the use of which is constantly increasing. We understand that the estimated cost for such a survey and examination by the Chief of Engineers is $157,000, which amount we request be included in the Senate version of this legislation.

We also request authorization for the improvement of the harbor at Morehead City, N. C., as recommended by the division and district engineers of the Army Corps of Engineers. I have just been informed that the Board of Engineers for Rivers and Harbors has, within the last few days, approved this project and the recommendations of the division and district engineers. We believe its prompt accomplishment to be clearly in the public interest.

We sincerely hope that your committee will give careful and favorable consideration to all the essential projects covered by H. R. 9859 and particularly those listed above, and we respectfully request that this letter be made a part of the committee's record in this matter.

Sincerely yours,

FRANCIS T. GREENE.

CHESAPEAKE AND DELAWARE CANAL

VILLANOVA, PA.

The proposed widening and deepening of the Chesapeake and Delaware Canal affects one of the most beautiful areas in the United States—the Elk River from Turkey Point to Welch's Point. Unlike much of the Eastern Shore, hills rise gently on both sides of this mile wide river—on the western side several exceed 300 feet. Numerous harbors, points, and streams create a very long shoreline and an ever-changing view up and down the river. This long shoreline affords numerous splendid sites for houses. The river's edge is dotted in some spots with cottages and cottage developments; in others, fields or woodlands reach down to the water's edge or to high bluffs. There are public bathing beaches, small-boat anchorages, a large State park, several camps, and a number of private docks and diving floats, attesting the use of this river for recreation. The water is fresh except in times of drought when it is slightly brackish, and according to test and experience is safe for swimming. On summer week-ends especially, the water of the Elk is enjoyed by thousands of bathers, for at no season of the year are sea nettles, the bane of the Chesapeake farther south, in evidence. There are scores of yachts plying back and forth, and a great number of rowboats, sailboats, and outboards.

The upper Chesapeake is the largest readily accessible and relatively unspoiled area on the middle Atlantic seaboard providing fresh water recreation. Thousands of people from the Philadelphia metropolitan area including Chester, make the easy 2-hour trip by car to its shores. Hundreds come from Lancaster, Reading, and other points equally convenient. Wilmington and Newark, Del., are within daily commuting distance.

Yet the recreational potential of this area has not been fully developed. Farms continue to dominate the shoreline and as farms they have produced well enough, or owners have been sufficiently affluent so there has been no intensive pressure to subdivide. As waterfront property becomes scarcer, as people again have time for recreation, as taxation increases, pressure leading to the breaking up of these farms to a more intensive use mounts. Few can be expected to survive for much more than another generation. All these farms form part of the most valuable land resources of the people in Maryland, eastern Pennsylvania, Delaware, and New Jersey so long as their usefulness for recreation is not impaired.

Many people are deeply attached to the Elk River. Perhaps this appreciation of the Elk was most eloquently expressed 300 years ago by Augustine Herman, who in payment for surveying Maryland was told by Lord Baltimore he could choose throughout all Maryland the location he most desired for a land grant. His choice was a few miles up the Bohemia River overlooking the Elk.

With the development of a larger canal as proposed, I fear the destruction of the Elk River because I have seen how the Delaware has been destroyed. Sewage and industrial wastes caused the major damage, but wave action, bilge pumping, ship sewage and refuse have contributed also. Only recently due to the energetic efforts of Senators Duff and Martin, during their respective terms of office as Governor of Pennsylvania, has this condition begun to be rectified in the Delaware. However, even now, inadequate Federal appropriations for patrolling, division of responsibility between the Army engineers and the Coast Guard provide little assurance to those of us on the Elk that our river can be kept, as we know it, if added traffic occurs. Then, too, we are having difficulties with the existing canal. Already, wave action of ships going by has all but eliminated the feasibility of mooring small boats in the Elk River below Town Point. Already the water is muddied by the propeller wash and the bow and stern waves on the banks.

making the water less satisfactory for swimming. The wave action from ships is eroding our shores, pulling out grass in the shallows. Food for fish and wildlife has been reduced. Both gunning and fishing have been getting poorer and poorer along the Elk in recent years. Before the canal was deepened the fishing rights to shore front property were salable readily and sizable catches obtained. Now commercial fishing is all but destroyed.

While in the winter geese and ducks still frequent our waters, and gunning blinds are still built along the shores by the hundreds, there is less food in the water and as a consequence there has been a noticeable decline in shooting.

Because excessive speed is a main cause of this damage, we should be able to get at least partial redress by organized complaints to the Army engineers. But I fear what may happen if the enlarged canal, as proposed, should be undertaken without specific safeguards which will not only acknowledge the existence of the aforementioned values of the Elk River but also will require their protection.

I therefore urge you to modify the bill, as follows:

1. That there be a clause added to the bill which states: "that in the improvement work and operation of the Delaware and Chesapeake Canal due regard shall be given to protecting the shorelines and the wildlife and recreational potentialities of the upper Chesapeake Bay and Elk River."

The reason for this request must be apparent in view of my preceding remarks.

2. That the provision for an anchorage basin in the Elk River near Elk Neck State Park be removed from the bill, that the Army engineers restudy further the location of this basin with the view of placing it where it will interfere less with the recreation and wildlife opportunities in the Elk River.

This request is made because any anchorage basin will be a nuisance. As ships start and weigh anchor, an immense amount of mud and sludge is moved up by their anchors and whipped up by their propellers, especially when it is necessary to change the ships' direction before reentering the channel. Residents near the present Town Point anchorage complain that Piney Cove has become silted and that water conditions for bathing are being impaired. At times oil polution has occurred.

Inasmuch as the further deepening of the canal to 40 feet is a possibility, according to the Army engineer report, the location of the anchorage should be adequate for even larger ships eventually. The proposed location is close to the Elk Neck shore. Widening it could only be accomplished by grave imposition on the adjacent shoreline property owners.

It seems almost an affront to place an anchorage so close to the State Park for many people use this one free publicly operated beach on the Elk. This park was given the State of Maryland by the late William L. Abbott, an eminent naturalist and explorer. It is marvelous wooded area with cabins and picnic groves. It provides the kind of recreation and social life which exemplifies the Elk River—the idea of family recreation rather than individual recreation. Its preservation must be encouraged.

An anchorage on the Elk might indicate the use of Cabin John Creek, or portion thereof, for a dredging dump just as Pearces Creek, several miles to the south, was used during the making of the 27-foot channel 17 years ago. Cabin John Creek is a beautiful small estuary, a haven for small boats and is, upstream, protected from serious wave action from passing ships. In the past few years a number of attractive cottages have been built here.

It would appear that the logical space for an anchorage would be near Aberdeen Proving Grounds where the shore is not available for recreation and where there would be least damage to recreational areas.

It is suggested that approval of the location of the anchorage be handled in a separate bill at a succeeding session of Congress.

I further urge, though not to be included in the bill—

1. That no new dumping areas for dredgings be established in the Elk River. Here again the reasons are clear, the Elk is used and will be used even more intensively in the future for recreation. Our marshes, our streams, our lowlands are beautiful and productive of wildlife. Here again the restricted area of Aberdeen Proving Grounds could serve as a dumping area with minimum destruction to recreational areas.

2. That the Army engineers and the Coast Guard be required to set a low speed for ships using the canal and its approaches.

3. That the Army Engineers and other governmental agencies concerned be directed to make appropriate studies of the effect of the canal and its operation on the fish, wildlife and recreation of the upper Chesapeake Bay, reporting their findings to the Congress and the public at yearly intervals.

The reason for this last proposal is simply to remove from the realm of opinion and controversy as much as possible the actual effect of the canal and its operation on the fish, wildlife, plantlife, water condition, shoaling, erosion, and other appropriate factors so that the Elk River area can be useful for commerce, recreation, and wildlife. At present the Fish and Wildlife Service of the Department of the Interior has such limited jurisdiction in the proposed project that they do not even mention the Elk River or upper Chesapeake Bay in their letter approving the project. Apparently they have made no studies of the present or proposed canal construction or operation as far as the upper Chesapeake is concerned.

Public Works projects such as the widening and deepening of the Delaware & Chesapeake Canal by necessity must be evaluated on their long-term benefits to our society. The Army engineers in order to justify the economic advantages of the canal have projected to the year 2009 the increasing traffic that will probably use this canal.

Population predictions suggest a population of 200 million by 1970 and double our 1950 population by 2010. In the face of such expected growth and concentration along the eastern seaboard, recreation space, fish and wildlife habitat will have to be protected zealously. Annual reporting on fish, wildlife and recreation, along with the report now being issued annually covering canal traffic would help keep in proper perspective the values and resources of the upper Chesapeake, not only for us today but for generations to come.

WILLIAM W. JEANES.

RATHBUN DAM, CHARITON RIVER, IOWA

The Rathbun Dam project, as we understand it, contemplates the building of a dam on the Chariton River, near the town of Rathbun, for flood-control purposes. Estimated cost of dam $19,500,000; land that would be submerged, 18,000 acres; drainage basin above dam, 21 townships or approximately 756 square miles; land protected below dam against overflow approximately 150 square miles. (This figure by multiplying 150 miles, the length of Chariton from dam to its junction with Missouri by 1 mile, the width of overflow lands. This is a high estimate.)

Assessed valuation of farmland in drainage basin $13,500,000. Number of farmsteads, 2,300. Drainage basin comprises basins of north and south Chariton Rivers in Appanoose, Wayne, Lucas, and Clarke Counties. We wish to advance the following arguments against this project:

1. At least half of the 18,000 acres submerged will be a total loss and the other half nearly so.

2. There is a better way to meet the problem. This by a soil and water conservation spread over the whole Chariton Valley Basin.

Points of this program:

(*a*) A system of small dams on farms in the basin, costing from $500 to $1,500 apiece, with outflow regulated by underflow outlet tubes. These would be built where they would take up very little cultivable land, they would act as silting basins, and stop deep gully erosion as well as regulating waterflow.

The cost of building a $1,000 dam on each of the 2,300 farms would be only $2,300,000.

(*b*) A system of soil conservation including gully-erosion control, strip, and contouring farming, grassed waterways, and crop rotation with more legumes and grasses, such as is being carried on by the Iowa Soil Conservation Service. The sum of $400 expended on each farmstead would be $920,000 raising the whole cost of the plan in the upper Chariton Valley to $3,200,000. For $19,500,000 the contemplated cost of the Rathbun Dam, the benefits of this plan could be extended over an area of 110 townships or approximately 8 counties in southern Iowa embracing 11,000 farmsteads in the valleys of the Chariton, Whitebreast, and Cedar Creeks, and Thompson's Fork of Grand River, besides affording equal flood protection to farms in the lower Chariton Valley and extending it to a large area of floodlands in Missouri in Thompson's Fork at Grand River.

A fish pond and water supply for livestock would be afforded to every farm, the sinking water table would be raised and south central Iowa with its beautiful wooded hills and valleys would become one of the most delightful regions in the United States.

Such a plan is already underway in Little Sioux River Valley in western Iowa. We believe it and another in southern Iowa might set the pattern for the most complete and beneficial soil and water conservation programs ever undertaken

in the world with a pattern of rural life the most happy and satisfactory ever known.

What would be the gain to Centerville and Mystic business from the building of the dam?

The engineers estimate that $12,500,000 would be paid out for labor over a period of 5 years and that most of it would be spent locally. What a shot in the arm for local business. But wait, 200 farms would be totally submerged and lost. If each now employs 2 men at an average of $8 per day for 300 days would be $960,000; 300 farms partially submerged, 1 man on each thrown out of work would be $720,000. The yearly total of $1,680,000, and for 6 years $10,800,000.

Seemingly a gain of $1,700,000 over a 6-year period but at the end of the 6 years the laborers would leave, the loss from farm revenue would continue indefinitely and the deficit would be enormous. More: the region to be submerged now produces:

2 million pounds of beef annually worth	$500, 000
2 million pounds of pork annually worth	400, 000
Broilers and other poultry	99, 000
Eggs	60, 000
Total	1, 059, 000

Hay, sheep, hickory nuts, cash grain, lumber, coal, etc., are difficult to estimate.

Dams like the ones proposed at Saylorville and Red Rock may be justified for the protection of cities like Des Moines and Ottumwa but there is not a town of 1,000 people on the whole course of the Chariton and the flood lands below Rathbun are of such character that a very large expenditure would be needed to make them profitably productive.

The Rathbun dam typifies a great Midwestern problem. Shall we have enormous and expensive dams or upland soil conservation which retains the water where it falls?

The upper Chariton Valley has a deep black soil, once covered by waist-high native grass. This retained the early spring rains, held the water table high, and prairie creeks and sloughs ran through the entire year. Now these spring rains run off quickly from close-cropped pastures and cultivated fields and we have floods in May and June and dry stream beds in late summer and fall. Thirty miles of the upper Chariton were dry for 7 months last year, wells went dry, city water supplies failed. As of today small streams are dry and Albia and Centerville threaten to curtail use of water. Upland soil and water conservation would hold the water on the land where it is desperately needed and would be far less expensive.

CONSTRUCTION OF RATHBUN DAM AND RESERVOIR WILL TAKE A LARGE AMOUNT OF AGRICULTURAL PRODUCTION FROM THE AREA

We ask that this Rathbun Reservoir project be canceled permanently and the following counter proposal be considered:

We wish to submit this counter proposal, which is to control floods on the Chariton River by putting soil conservation practices on the upland in the watershed area. Using the $19 million figures for this project would equal $53 per acre and we believe that amount spent by individual farmers would control the floods without destroying 27,200 acres of productive land.

This dam would cause the REA heavy loss in labor and investment.

Over 5 million pounds of beef is produced in this area yearly, equal amount of pork, 396,000 pounds of commercial broilers, and as many pounds of productive flocks on the farms will be destroyed. A half million dollars worth of hay is sold out of this area annually.

We believe 500 farm units will be disrupted or totally destroyed by this dam. Expense and work of moving farm homes and buildings will be tremendous.

One hundred and sixty years of hard work and careful planning have gone into the developing of this valley. Electricity has made these farms modern.

We wish to submit our objections to the Rathbun Reservoir for the following reasons:

1. Flood out productive land.
2. Can't be used successfully for recreation.

3. Will destroy all wildlife in area inundated.
4. Will divide present land area in three sections.
5. Take several thousand acres of land out of taxation which will place a burden on other property owners.
6. Cause a complete reconstruction of telephone and power lines.
8. Many landowners caused the expense and hardship of relocating.
9. County will have the burden of relocating and rebuilding roads and there will be a laxity on upkeep of roads at present time.
10. Will destroy natural resources such as limestone, coal, and timber.
11. Displacing of industries already established, namely, coal mines, sawmills, commercial broiler plants, limestone quarries, and agriculture.
12. Last but certainly of great importance is disrupting school systems, churches, and community activities.

MONROE COUNTY SOIL CONSERVATION DISTRICT, ALBIA, IOWA

Commissioners: Sterling B. Martin, chairman, Melrose, Iowa; Frank L. Bell, treasurer, Albia, Iowa; Alton C. Wilcox, Albia, Iowa; James W. Foster, ex-officio, Albia, Iowa; Clarence E. Babcock, extension director, secretary; E. E. Smith, area conservationist; Harold Anderson, farm planner; John A. Botts, conservation aide; Pauline Flattery, clerk.

June 4, 1954—Report on Monroe Honey Creek Watershed as of January 26, 1954

I

1. Size, 3,047 acres.
2. Drainage basin, Chariton River.
3. Objectives of farmer organization group and district commissioners: To bring about development of complete watershed control program through cooperation with SCS and other agencies.
4. Number of farms all or partly in watershed, 30.

II

	Present	Recommended	Conversion
1. Cropland—acres	2,095	1,875	−220
2. Pasture—do	802	972	+170
3. Woodland—do	50	100	+50
4. Lots and roads	100	100	

III

Areas subject to flooding:
Pasture, 10 acres.
Woodland, 10 acres.
Bridges on main stream, 2.

Progress in soil conservation work:	*Acres*
Active farm conservation plans, No. 4	490
Active requests for plans, No. 20	2,135
Conservation survey completed	3,047

Major conservation practices

	Needed	Planned	Applied
1. Contouring—acres	1,990	198	182
2. Strip cropping—do	200	0	0
3. Terraces—miles	50	1.25	1.25
4. Diversions—do	2	0	0.03
5. Waterways—do	30	0.5	1.25
6. Farm ponds—number	45	2	5
7. Gully control structures—do	30	0	0

This group has participated in three planning meetings since the above report was prepared.

It is anticipated that basic conservation plans will be completed on this watershed group by late next spring. It is further anticipated that a major portion of the soil-conserving practices will be completed in about 3 or 4 years.

FRANK L. BELL,
Chairman, Monroe County Soil District.

WAYNE COUNTY SOIL CONSERVATION DISTRICT, CORYDON, IOWA

Technicians: E. E. Smith, area conservationist; Howard Ballew, work unit conservationist; Robert H. Swarts, conservation aide.

Commissioners: Maurice Goode, chairman; Arlo Noble; Harvey Holder.

To Whom It May Concern:

The Wayne County Soil Conservation District has approximately 1,130 farms in the Chariton River watershed, we have farm plans on 40 to 50 percent of the farms in the area at this time, we are anticipating a 70 percent signup in the next 2 years. The Wayne District commissioners go on record as very definitely opposed to the proposed Rathbun Dam as a flood-control measure because it is a temporary measure and will not be a success without a complete soil-conservation program on the land in the watershed. With a complete watershed soil-conservation program there will be no need for spending such vast amount of money for the dam to say nothing of the land taken out of production and the subsequent loss of tax revenue.

We feel that we can control approximately 50 percent of the runoff in severe rains in the upper reaches of the watershed with a 95 percent program. With that control the chances of a flood would be nil.

MAURICE GOODE,
Chairman.
ARLO NOBLE,
Commissioner.
HARVEY HOLDER,
Commissioner.

THE CHARITON VALLEY CONSERVATION ASSOCIATION

The Chariton Valley Conservation Association was organized and became incorporated June 15, 1949. The directors of the organization consist of one Commissioner from each soil conservation district and 12 other directors, 4 of whom reside in Appanoose County, 3 in Wayne County, 2 in Lucas County, and 1 each in Decatur, Clark, and Monroe Counties.

Its objectives are to promote the general economic and social betterment of the people of Iowa by seeking to promote better water conservation, drainage and flood control within the area drained by the Chariton River in Iowa; to aid in furthering a general conservation and flood-control program throughout the State. This watershed includes land in part of six counties in Iowa, which are as follows:

	Acres in county	Acres in watershed
Appanoose	366,747	258,560
Wayne	317,084	112,000
Lucas	264,380	88,320
Clark	216,330	16,640
Decatur	322,188	8,000
Monroe	262,278	7,040
Total	1,734,007	490,560

In order to carry out the objectives of the organization, each of the 6 districts were requested to form a subwatershed. 4 of the 6 districts have done this and the 1 in Lucas County has been selected by Congress as 1 of the 50 pilot watersheds in the United Sates. It is the policy of this organization to promote flood control by soil and water conservation and we feel that if the $19 million to be spent on the Rathbun Dam could be used on the upland in the Chariton Valley Conservation Association for soil-conservation practices and retention reservoirs that the same flood-control objective could be obtained as by the Rathbun Dam plus a

protection of the 18,000 acres to be inundated by the dam. Also the valuation of the upland would be increased approximately $53 per acre on the 357,120 acres in the watershed.

As this watershed contains one of the 50 pilot watersheds in the United States and as construction work has been started on it and also having 3 other active watersheds this organization would like to see the whole of the Chariton Valley Watershed used as a larger pilot watershed to observe the flood control results on the Chariton River.

ARTHUR M. STREEPY, *Chairman.*

MONROE COUNTY UPPER HONEY CREEK WATERSHED, COVERING 3,047 ACRES

Covering all or part of 30 farms. Ninety-six percent of farmers are interested in upland conservation. These farmers have their farm soil survey made and a good start on establishing conservation practices. They have an active organization and have participated in three conservation planning meetings this spring (1954).

HONEY CREEK WATERSHED

(Part of the Chariton River Valley Watershed)

Name: Honey Creek.
Major drainage basin: Missouri River via Chariton River.
Organization: Honey Creek Watershed Association.
Date organized: April 5, 1951, Iconium, Iowa.
Objectives: Organized effort to speed installation of soil and water conservation, silt and flood-control practices in this watershed.
Number of farms: 65.
Number of basic plans: 40 percent.
Number of advanced soil conservation plans: 20 percent.
Number of initial soil conservation plans: 15 percent.
Number of people assisted by District: 90 percent.

RUSSELL, IOWA, *June 2, 1954.*

We, the undersigned cooperators of The Honey Creek Watershed Conservation Association, where the Government is now developing one of its 60 pilot watershed projects, protest the building of the Rathbun Dam on the Chariton River because the water in this reservoir will cover land in Honey Creek Valley thus nullifying and making useless many of the benefits which the project would provide. The Honey Creek project which includes flood control, will cost $23 per acre, whereas the Rathbun Dam project will cost about $54 per acre for the entire Chariton Valley in Iowa. We feel that complete watershed treatment such as that on the Honey Creek project if applied to the entire Chariton Valley of 352,000 acres would produce many more benefits at less than half the cost without disrupting or destroying any farms, homes, highways or transmission lines.

Vogel W. Smith	R. H. McKinley	R. W. Malone
Burdette Wirts	Everette McKay	Marion Watts
George W. Colvin	C. R. Kells	Pat Carroll
Harold R. Johnson	Neal Pierce	Ed O'Donnell
Ted Smith	G. A. Kells	Tom O'Donnell
Warren C. Blue	Atlie Winsor	W. R. Moore
Grant Curtis	William L. Green	Clayton Blue
Ralph Werts	Raymond E. Meyer	Richard Werts
Edwin Johnson	Lester Palmer	Max H. Beals
Lee Cottingham	Guy L. Edgington	Cecil C. Hawkins